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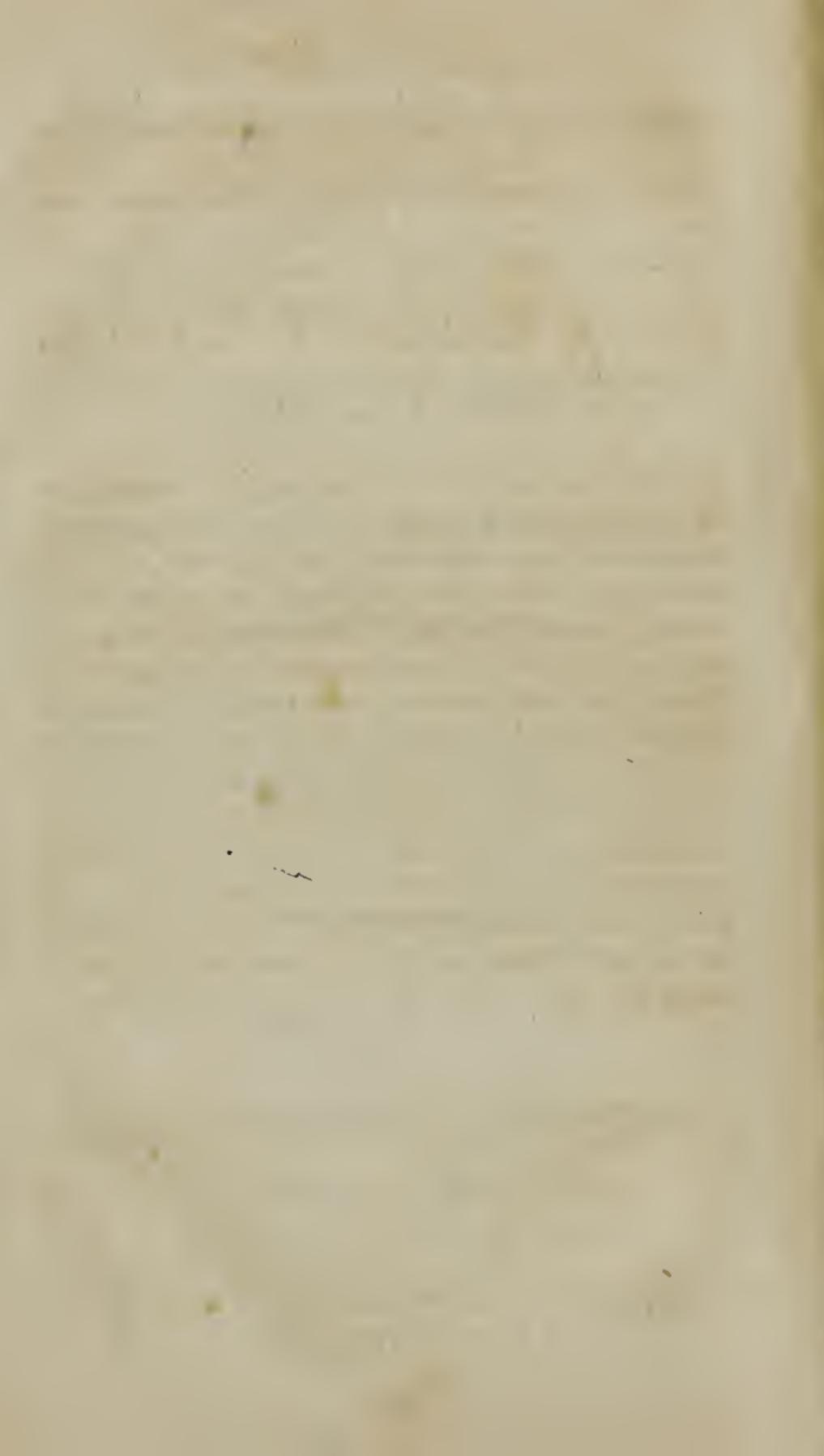
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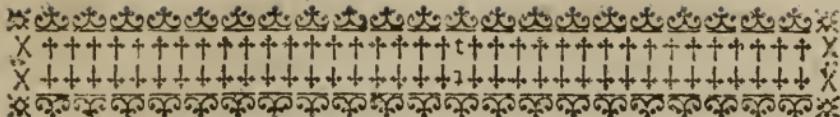
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INTRODUCTION.

CONSUMPTIONS of the lungs is a disease, that has been considered, as peculiarly endemical to the inhabitants of this country. Whether occasioned by the infinite variety, and sudden transitions of the climate, by our insular situation, or manner of living, is not easily determined. Where a disease occurs so frequently *, that few families are without melancholy instances of its ravages, it might reasonably be expected, that something more than a palliative method of treatment, would have been discovered. But I fear it is an incontestable truth, that when it is confirmed, a perfect recovery seldom takes place.

The

* In the London bills of mortality, the number said to die of consumptions, is generally between four and five thousand annually; exclusive of those that are not buried in parochial church-yards, and in every other part of the kingdom. Though the manner of forming these registers is liable to such uncertainty, as calls loudly for reformation; and the term Consumption is applied to many different diseases; yet it will serve to demonstrate, that a great number yearly perish of this disease.

The authors who have written upon affections of the lungs, are numerous and respectable; each proposing a method of cure, according to his idea of the cause, from which the complaint originates in the constitution. These opinions have been so various, and so different from one another, that sometimes they appear more like the sportings of the imagination, than learned and scientific enquiries. One author accounts for the hectic fever*, by supposing the strength of the muscles to be reduced faster, than that of the heart; and therefore nothing more is necessary for its cure, than diminishing the one, and increasing the other. Some others imagine it proceeds from animacula in the lungs, and recommend mercury and steel†. But since the publication of the Phthisiologia by the learned Morton, the general opinion has been, that the hectic fever, and subsequent diarrhoea, were caused by the purulent matter in the lungs being absorbed, and carried into the circulating fluids; and hence they have been termed putrid. This hypothesis has been adopted by the latest authors upon the subject, and I believe is received by the most eminent physicians of the present age. Though the practice founded upon the theory of putrefaction, is in some measure given up; yet the impression is not, by any means, perfectly

* Robinson.

† Marten, Desault, &c.

fectly removed ; and the disease continues not less fatal, than it was formerly. How far the method, recommended in the following pages, may tend to remove this reflection from the profession, time only, and the experience of those who shall make trial of it, will determine.

In the course of near twenty years practice, in some degree extensive ; and, from particular reasons, having directed my attention in a special manner to complaints of the breast, I have had frequent opportunities of viewing the progress of Phthisis through all its stages, in every sex and age. And having observed with great regret, the inefficacy of the means usually employed in its cure, I have ventured, with great diffidence and respect, to lay before the public a method, I have for some years found more successful.

In my attendance upon the sick, maturely reflecting on the various symptoms, and changes that take place in different periods of the disease, I have long been convinced, that the commonly-received opinion of absorption of matter from the lungs, and of that matter being acrid and putrid, has been too implicitly followed ; and when investigated attentively, will be found to rest upon principles, that do not exist in the animal œconomy. However bold and decisive this assertion may appear, I trust, when I have adduced my reasons in support of it, they will not only explain the origin of the hectic fever and

and diarrhoea accompanying Phthisis Pulmonalis, in a manner more satisfactory and consonant to what we know of the human body, than has hitherto been done; but at the same time equally absolve me from the imputation of temerity, or presumption.

The mode of treatment I shall recommend, is founded upon experience; and is what has proved effectual in those periods of the disease, that are attempted to be pointed out with precision. To do this with greater exactness, it may be thought, some instances of the disorder being cured should be related. But when it is considered, with what ease cases may be drawn up to suit any theory; and that they must rest upon the same ground of veracity with the other parts of the work, they will be found evidences not deserving much credit.

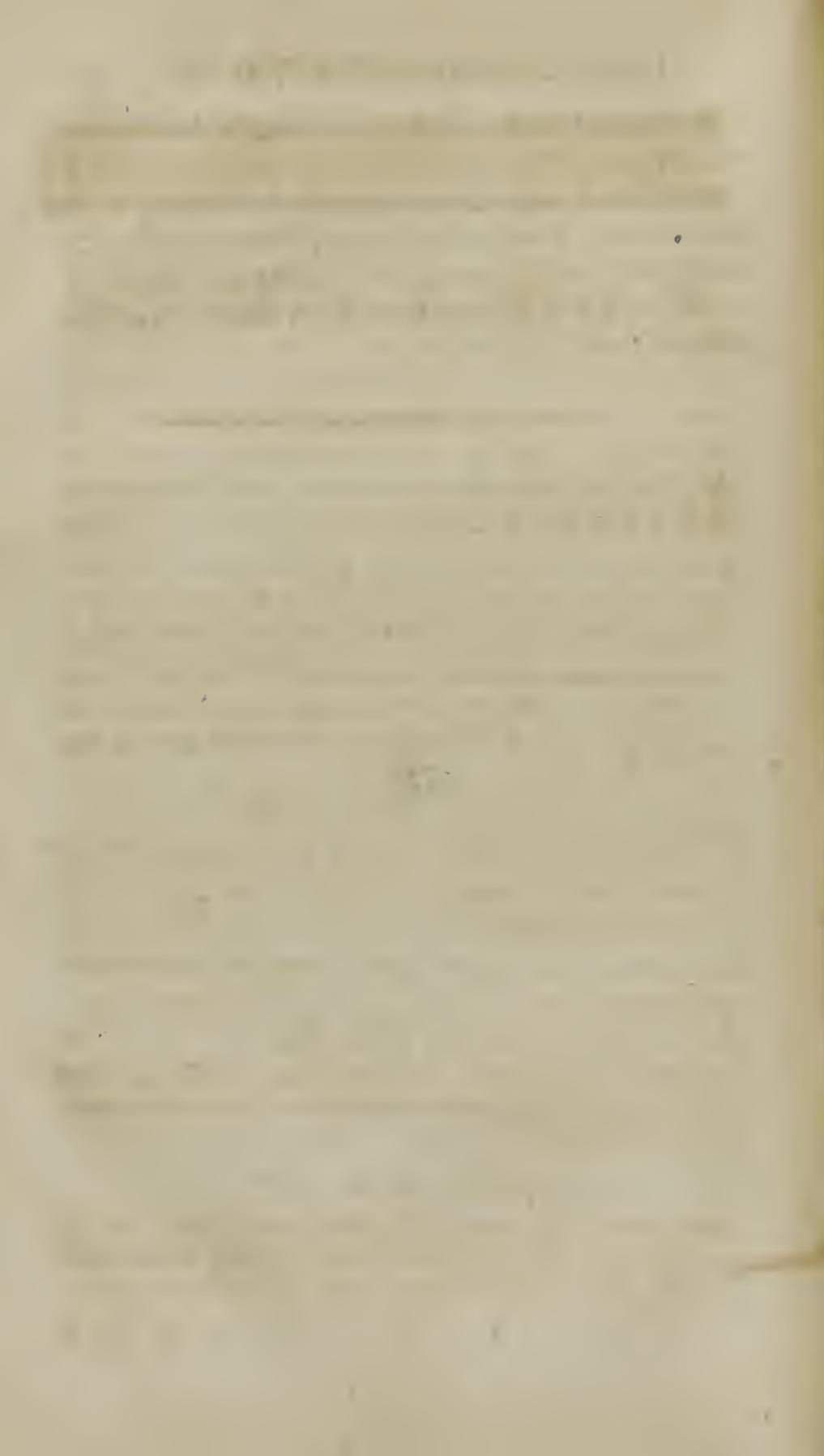
Excuses and apologies from young authors, are become so common, that they have lost their designed effect: perhaps, they do not always convey an idea of self-diffidence. The following Essay is published with a desire to improve the manner of treating a dangerous, and too often incurable disease. If it should in any respect answer that purpose, or suggest hints to those of greater abilities, apologies will be unnecessary. If that should not be the case, it will meet with deserved contempt, and sink into oblivion, with numbers that have gone before it.

In an age like this, of philosophical enquiry, in which the human mind is daily enlightened by the rays of knowledge, I doubt not, but any attempt, however weak, to promote a science so essentially necessary to mankind, will be received with liberality, and judged with candor.

NEWMAN-STREET, }
NOV. 20, 1782. }



G O N-





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P H T H I S I S P U L M O N A L I S.

C H A P T E R I.

IT is not my intention, to enter into a minute description of every particular symptom, and predisposing cause of a consumption. They are numerous and uncertain, and may be found with much greater accuracy, in almost every author who has written upon the subject. I propose taking a succinct view of the general symptoms, and progress of the disease. To consider the most common causes, and the usual means that have been attempted in the cure. And then to offer such observations, as have occurred in my attendance on the sick.

Consumptions arising from various causes, have been differently denominated, Symptomatic, Scrophulous, Scorbutic, Astmatic, Hepatic, &c. *. I mean to confine my enquiries to the true Phthisis Pulmonalis, or Consumption of the Lungs, preceded by tubercles.

C

I would

* Morton, Phthisiologia, Lib. 3.

I would define the Phthisis Pulmonalis to be, an expectoration of purulent matter from the lungs, by means of frequent coughing; attended with a fever, having morning sweats, and remissions in the forenoon: occasioning a wasting of the flesh and strength.

This disease usually attacks people of a delicate, weak, tender constitution; and, as such habits of body are peculiar to certain families; in such cases, it may with some truth termed an hereditary disease; but not in the same degree as the Scrophula, Lepra, &c. It appears in persons of every age; but most commonly from fifteen, or about puberty, to thirty-five. But children have been born with violent coughs, emaciated, and have died in the month, evidently of a confirmed Phthisis.

Young people who have grown fast *, who are tall, thin, narrow-chested, of a delicate complexion, and clear skin, are most obnoxious to it. The projection of the scapulæ, commonly mentioned by authors as resembling wings, is occasioned by the narrowness of the thorax, the shoulders thereby, being brought farther forward; and should not be considered as a symptom, but the effect of a pre-disposing conformation. An ingenious author † has said, the whiteness and transparency of the teeth is “the distinguishing characteristic, or a pre-disposition to it.” I must confess, though I have observed this circumstance in some cases, it has occurred very seldom; and in many patients I have attended, was entirely

* “ Adolescentes, qui pectoris et corporis ferè totius musculos graciles, tenues, et laxos habent, ut plurim in tabem delabuntur.”

Clift, Wintringham, Bar. Com. §. 28.

† Dr. Fort Symmons, New Method of treating Consumption, p. 13.

entirely absent. How far a particular symptom can be, at the same time, the characteristic of the genuine disease, and of a pre-disposition to that disease, I shall not pretend to determine * ; but considered as a distinguishing character, it appears to me vague, and liable to great uncertainty.

As the great danger in Consumptions, proceeds from the patients being lulled into a fatal security, fancying their complaint a common cold, easily to be removed by simple remedies ; it is of the utmost importance, to ascertain an absolute criterion of the disease. For this reason, which may induce the author to re-consider the subject, and not from a desire to criticise the works of others, I have noticed this circumstance.

Whether from their sedentary life, the structure of their bodies, or some other particular cause, females are more liable to this disease than males. We frequently observe the most beautiful and elegant of the sex, fall victims to this cruel malady : their minds participating of the delicacy of their bodies ; being, for the most part, sensible and uncommonly acute in their understanding.

The present absurd fashion of introducing young women early into the world, as it is termed, before their bodies have acquired a proper degree of strength and firmness ; and the mode of living among people in genteel and high life, and even in middling stations (if any such can be found) is one great cause of the frequency of consumptions : but this will be more particularly considered in another place.

The

* " The propensity to any particular state, must surely be short of that state to which it tends, and incapable of giving that, which it has not itself attained."

The origin of the genuine Phthisis may generally be traced from Hæmoptysis, or blood issuing from the lungs; from what is termed taking cold; and sometimes from external injuries. When the disease has made a certain progress, the indication of cure is nearly the same, however the symptoms may have differed in the incipient state.

A cough more or less troublesome at night, usually dry, occasioning pain and stitches in the breast, sides, and head; slight rigors, and some degree of feverish heat, with pain in the back, joints, and limbs, are the common effects of taking cold *. This has been by authors reckoned the first stage of the disease. The method of treating such complaints is well known: keeping warm, diluting drinks, softening pectorals, gentle aperients, and losing some blood; together with abstinence, generally removes them in a few days. The learned Sydenham thought the latter injunction sufficient for the whole †. Indeed, the frequency and facility of removing these slight indispositions, render people exceedingly careless; and as what can be done at any time, is seldom done at all; so the remedies which might have succeeded in the beginning, are postponed till the complaint is too firmly fixed to be removed by their efforts.

The

* “ *Animadvertisendum est, effluvia ista, quæ a sanguinis massâ per insensibilem transpirationem obligari solent, à frigore cutis spiracula subito contrahente intrò verti, & in Pulmones deponi, quos irritando Tussim mox excitant.*”

Sydenham, Tussi. Epid. p. 207.

† “ *Si Tussis nondum febrim, atque aliâ symptomata, quæ ut plurimum se adjungere solere diximus, accersiverat, sat tis esse arbitrabar, ægrum à carnis & liquoribus Spiritu- osis quibuscumque arcere.*”

Sydenham, Tussi. Epid. An. 1675

The symptoms increase: the cough becomes more violent, hard, dry, and incessant; restless nights; the pains in the thorax more lancinating and fixed; the difficulty and quickness of breathing considerable; expectoration little and frothy; the pulse quick, hard, and sometimes like a small cord; at others, full and laborious; the tongue white, and the back part tinged with yellow; the eyes dull; the countenance pale and sickly. The patient still keeps up; and as it is only a cold, that will easily go off, does not think it necessary to confine himself: perhaps, by the advice of some female sybil, takes strong broth and wine whey, to nourish and comfort him.

If the patient happens to be a female, with all the spirits, warmth, and inexperience of youth about her; she will wrap herself up in the morning, while in the house, in what the fashionable world call an undress; but in the evening, whatever may be the state of the weather in this drizzling climate, she is then half naked (being dressed) alternately exposed to the chilling damps of the cold night air, and the heated atmosphere of a drawing-room, loaded with the various exhalations arising from a crowded assembly. We are not then to be surprised at the rapid and unexpected progress which the disease makes in such cases.

I have always thought it a matter of great importance, and some difficulty, to determine when complaints of the thorax may with propriety be termed a consumption.

A cough with pain in the chest and feverish heat, though it may become, cannot be termed the first stage of the disease; because we know these symptoms may be easily removed. The frequent application of the term Consumption to such complaints, has been the cause of much evil to those really under the disease; as by trusting to remedies, that have in such

such cases been found effectual, they have been past recovery before they apprehended themselves in danger.

The symptoms I have enumerated, may properly be said to tend to a consumption, if not speedily removed; and as the hard dry cough and dyspnœa, indicate the existence of tubercles, however small; it may be called the inflammatory or first period.

In a short time the fever becomes more intense, with slight remissions in the morning; when a sweat breaks out upon the breast and upper parts of the body, which sensibly relieves every symptom. The cough continues, and is aggravated in a recumbent posture, keeping the patient from sleep till towards morning. The expectoration increases in quantity, is frothy, sometimes streaked with blood. During the fever, the cheeks seem painted with a circumscribed spot of pure florid red; the lips, and tubercles in the canthus of the eyes, are also brighter than when in health. The fever is augmented after eating, particularly solids, with flushing in the face, and burning heat in the palms of the hands, and soles of the feet.

As the disease advances, the fever comes on about the middle of the day, increases till evening, and is violent most part of the night, till the sweat breaks out, and the patient gets some rest. In the morning they find themselves relieved; but get up languid, pale, and unrefreshed by their sleep. Though the pulse is always quicker than natural, yet there is a remission of the fever for some hours in the forenoon. The expectoration becomes more copious, mixed with pus in small globular masses; sometimes disagreeable to the taste; yellow, greenish, and, as the disease advances, of an ash-colour. The cough becomes less hard and loose; the pains in the chest and head abate, which feeds that delusive hope, by which

which the patient is supported through every stage of this distressing disease; never giving up the expectation of a cure, and always thinking themselves better. They are particularly ingenious in accounting for every accession of fever, or increase of any other symptom; and as readily attribute their remission to the effects of some remedy which they have taken by the advice of their physician, or their friends: for in this disease, every one who visits them knows a certain and efficacious remedy.

At this period, when the hectic fever has regular remissions, when the sweats come on every morning, and when the patient spits up matter freely, I am disposed to think the disease confirmed.

The countenance now gives evident signs of wasting, the eyes are hollow and languid, the cheeks prominent, the nose sharp; their flesh wears away, and their strength fails them; the cough is more distressing in the first part of the night; the breathing short, quick, and offensive; their sleep less, and disturbed; morning sweats more profuse and melting; the interval from fever less distinct. The spitting is more loaded with matter, brought up more easily, and in greater quantity, sometimes a pint in twenty-four hours.

This I reckon the second period of the disease; while there still remains some degree of strength, and the stomach is capable of digesting food. From the beginning the body is disposed to be costive, particularly after the morning sweats have taken place. The menses usually cease about this time.

The third and last act of this domestic tragedy, commences by the appearance of the looseness. From being costive, they have frequent motions in a day, which soon becomes a confirmed diarrhoea; every thing taken into the stomach, quickly running off by the bowels. The fever, heat, and cough, abate

abate of their violence, and the morning sweats become less profuse. The deluded patient still hopes a favourable event, and really suffers less than the afflicted parents, who see a favourite, perhaps an only child, wasting away before them by an incurable disease; and full of hope, unconscious of her danger, rapidly rushing to the grave.

The diarrhoea increases; the cough, spitting, and morning sweats, diminish considerably; the fever becomes moderate; their strength totally fails them; they have frequent faintings, sometimes a slight delirium; their lower extremities swell; till at last, death puts an end to their hopes and suffering at the same time.

It is not to be supposed, the symptoms keep the regular order in which they are placed here; on the contrary, they vary in almost every patient. In some the disease makes a rapid progress, and hence termed a Galloping Consumption. In others, and that the greater number, it is much slower. The duration, is in proportion to the youth and strength of the sick, from six months to two years. In some cases, the fever and other symptoms, are much more violent than in others, depending upon the habit of body and muscular strength; and therefore in males the symptoms run higher than in the other sex; and in the latter, the disease usually makes a greater progress before it is observed, frequently beyond the possibility of assistance. Of this I have met with many and melancholy instances, and not a few of them at boarding-schools; where the governess, from a well-meant caution, of not alarming the parents; and considering the complaint only as a common cold, neither acquainted them, nor called assistance till it was too late. Let me therefore caution parents, and all who have the care of young people, not to neglect coughs and affections of the breast;

breast ; lest by thinking them of no importance, and treating them with greasy emulsions, and a profusion of palling sweets, they sacrifice that time, which might be employed in pursuing a judicious plan of cure, and sow the seeds of lasting affliction to themselves.

CHAPTER II.

THE task would be difficult, perhaps impossible, to account satisfactorily for every symptom of this disease. Like many others, its violence and progress depending upon circumstances, which our limited knowledge in the laws and operations of the human body cannot perceive ; and on others, with which we are frequently not made acquainted. Violent exercise ; intemperance in eating, drinking, and the passions of the mind ; sudden stopping of accustomed evacuations, by taking cold liquors when heated ; and the effects of cold and moisture, are among the most common causes of Phthisis.

The effect of cold and moisture, either separately or conjoined, on the human body, has usually been accounted for, by the stoppage of sensible or insensible perspiration thereby occasioned. The symptoms which succeed, are pains in the limbs, joints, head, and back ; soreness in the throat, with slight shivering and flushing heat. If these symptoms were

10 AN ESSAY ON THE

occasioned by a retension of so much perspirable matter, as would have been discharged from the habit, during the time of their continuance; it is reasonable to suppose, that by opening the pores, and perspiring freely, the effects would cease. This, every day's experience evinces is not a fact. The fever and pains frequently increase, and continue some time; till by evacuations, diluents, and antiphlogistic remedies, they are removed. We also know, that by the wonderful conformation of our frame, when one secretion is diminished, another is proportionably increased. In a cold frosty morning, we perspire less, and make more urine. A stream of cold air from a door or window, will occasion a fixed pain in a particular part, without affecting the general habit; as a stiff neck, or pain in the shoulders. I have seen one side of the throat swelled and inflamed, by a momentary blast of cold air, without any other symptom succeeding. To suppose a local check to perspiration, will not reasonably account for this effect.

Perhaps the exhalent vessels, that secrete the fluid serving to moisten the interstices of the muscles, may be so affected by cold partially applied; as, instead of a clear transparent lymph, to secrete a fluid so viscid, as not readily to be absorbed by the lymphatic system; and by its remaining some time, occasion that stiffness and foreness in the parts, which is constantly felt.

I must own, I am not perfectly satisfied with any theory that has occurred to my mind, upon this subject, but least of all with that commonly received; nor am I disposed to enter fully into the question, a disquisition of that nature, however connected, not being essentially necessary to my design.

Into every cavity of the body, a great number of exhaling vessels open; they secrete a fluid, which preserves

preserves those cavities moist and smooth ; and by lubricating the surfaces of the different viscera, enables them to move on each other without injury. In the lungs, these vessels serve a nobler purpose ; they secrete a large quantity of lymph, which is carried off by the air in respiration. The apertures of these vessels, from any cause exciting inflammation, may be so altered, as to excrete a viscid matter like the sily crust on blood ; with which the cavities, and even the inside and outside of the heart have been found lined ; and this fluid must have the property of coagulating imminently after being secreted, otherwise, in the heart, the flux of blood must have washed it off. It is highly probable also, that from disease, these vessels have the power of changing their lymph into pus ; as large quantities have been found in cavities of the body, without any appearance of ulceration or abscess, from whence it could have proceeded *. The exhaling vessels in the lungs, having their mouths so altered, as to produce this viscid state of the lymph, a less quantity will be secreted ; and if from the effects of cold and moisture, the insensible perspiration on the surface of the body is obstructed, and a larger quantity thrown upon the lungs ; they will be loaded and oppressed ; their parenchymatous substance will become more dense and inelastic ; the diameters of the various branches of the pulmonary artery and vein will be lessened by its pressure ; and consequently the circulation of the blood through this organ impeded. When the lungs are in this state, the patients will breathe quick, and with difficulty ; they will feel pain in different parts of the chest, and a general soreness, and sense of fulness, upon a deep inspiration.

* See Hewson, on the Lymphatics.

inspiration. The ramifications of the bronchia * will be lined with this viscid lymph; which, by irritating their sensible coats, will occasion inflammation and frequent coughing; and we perceive in a recent cold, the matter is expectorated with difficulty, little in quantity, white, viscid, and tasteless. In a short time, as the inflammation and other symptoms abate, it changes to a yellow colour †, disagreeable taste, and is brought up with ease, in greater quantity.

Is it not probable, that such a state of the exhaling vessels takes place in the whooping-cough; where the fits are violent and continued, till a viscid glary phlegm is discharged? This idea seems to be confirmed, by the relief that is experienced, from frequent vomiting and change of air.

If disease produces such an alteration upon the exhaling vessels, and viscosity in the lymph; the same cause continuing to act, may increase that viscid quality, till it shuts up their extremities, and constitutes the small granules, every where found in diseased lungs, termed Tuberles. Almost every author

* This mucus is sometimes so viscid, as to fill up the ramifications of the bronchia intirely; and has been coughed up in masses exactly corresponding to those cavities, and have been termed Bronchial Polypii. The eminent Dr. Warren has published a curious case of this kind, in the Medical Transactions, Vol. 1.

See also Philos. Trans. Ab. Vol. 3. p. 68.

The liquor in the pericardium, has been found jellied to such a degree, as to bear cutting with a knife.

M. du Martell. Ab. Phil. Trans. Vol. 3. p. 69.

Other instances may be seen in Morgagni, Sed. & Caus. Morb. Lib. 2. Epist. 21. Art. 20.

† The manner of distinguishing this yellow phlegm from purulent matter, which it so nearly resembles, will be enquired into in Chap. III.

author who has written upon the subject, has supposed them to originate from diseased lymphatic glands; but I have long been of opinion, with a late ingenious anatomist *, that there are no lymphatic glands in the substance of the lungs. It therefore appears reasonable, to attribute their origin, to obstructions in the exhaling vessels; and this opinion will be strengthened, when we describe them more minutely.

CHAPTER III.

TUBERCLES are found, on dissection of those who have died of this disease, of all sizes; from the smallest granules, to the bigness of a horse-bean, and commonly in clusters. On cutting into them, they appear of a white smooth cartilaginous substance. In the smallest, no cavity or opening appears; in those farther advanced, on the cut surface we discover small pin-holes; in those still larger, are one or more cavities containing a fluid like pus; which being cleared off, in the bottom is perceived several small openings or holes; through which, on pressing the tubercle, matter is issued, similar to that contained in its cavity. The larger tubercles, when emptied of their contents, appear like a small capsula, into which entered a branch of the aspera-arteria.

When

* Hewson.

When the tubercles increase, they are termed Vomicæ. These are also of various sizes, from half an inch to two or three inches diameter; and are usually of an oviform. When found entire, their contents are a whitish, yellow, ash-coloured, greenish, and sometimes fœtid matter; and when ruptured, more or less reddish. Several branches of the aspera-arteria are found opening into these vomicæ; and they also communicate with others that lie contiguous: the apertures of the latter, are ragged and irregular; of the former, round and smooth.

The larger vomicæ are usually found empty, but on pressing the lungs, matter issues into the bronchia. The branches of the pulmonary artery and vein running upon the vomicæ, are found much contracted; and sometimes filled up with a fibrous substance; their pendulous ends, hanging loose in the cavities of the vomicæ, completely shut up and covered with a thick slough. By this wise dispensation, we see the reason, why hæmoptoe does not more frequently happen, when so great a part of the substance of the lungs is destroyed. And also, when it does take place, in what manner the mouths of the bleeding vessels are shut up again.

The parts of the lungs contiguous to the vomicæ are found inflamed, more or less solid, and impervious to air blown into the trachea; for when the other parts are thus distended, they remain depressed; nor is air admitted into the vomicæ, or at least in very small quantity.

When the lungs are partially affected, the upper and posterior parts are always diseased, and the sound portion is the inferior and anterior. When the affection is general, the superior is the worst; and the left side is generally found more diseased than the right.

Wherever tubercles or vomicæ are found, they firmly adhere to the parietes of the lungs near them; by which means a communication between their cavities, and that of the thorax, is entirely prevented*.

We have observed, that the exhalent vessels being affected by disease in different degrees, are capable of changing their contents, from a pure watery lymph, to a fluid so viscid, as to coagulate immediately on being secreted; and also to convert that lymph into pus of various qualities; which in its natural state is smooth, bland, composed of globules resembling those in milk, and inodorous; but according to the kind of inflammation, may become fœtid, thin, and fanious; as we find it in phagedenic and cancerous ulcers. If then tubercles are formed by obstructions in these vessels, by the viscid state of the lymph; and if pus is produced by secretion, and not by fermentation, as has been supposed; it seems probable, that the small pin-holes perceived in the substance of the tubercles, are the appertures of the exhalent vessels; and that the pus found in them, and issuing out upon pressure, is the lymph changed into that fluid. " And if pus in these cases is produced merely by secretion, so likewise it would seem probable, that even in abscesses, where there is a loss of substance, it is not the melting down of the solids, that gives rise to the pus; but the pus being secreted into the cellular membrane, from its pressure, and from other causes, deadens the solids, and then dissolves them; which is confirmed by observing, that even a piece of fresh meat, if put into an ulcer and covered up, is soon destroyed or melted down by the pus, which is thereby rendered more fœtid."

* MS. of the late Dr. Stark.

“tid*.” In this manner we can account for the substance of the tubercles being consumed by the pus that issues into them; and by the continual secretion, their sizes are increased, till they burst into the ramifications of the aspera-arteria.

As the most certain prognostic in this disease, is formed from the quantity and quality of the matter expectorated; it will be necessary to consider with attention, that part of our subject.

In the beginning, the matter spit up consists only of the mucus lining the trachea, mixed with air-bubbles. As the disease advances, it gradually changes in quantity, colour, consistence, smell, and taste; and becomes a thick viscid matter, of an ash-colour, slightly tinged with green, sometimes with blood; expectorated in small round spherical masses resembling pus. It has been said, that matter discharged “from a glandular suppuration, or erosions of the lungs, has commonly a sweetish taste; and that from a cyst is foetid and disagreeable†.” As we have observed that there are no lymphatic glands in the substance of the lungs, the first part of this assertion of course falls to the ground; and it seems probable, that the difference in the quality of the pus, depends upon the state of the inflammation, size of the vomicæ, and the time it has been retained.

If pus, or matter, is mixed with water, and slightly agitated with a whisk, it is easily diffused; and after standing a few hours falls to the bottom of the vessel. Mucus is with difficulty diffused in water, requiring strong agitation, and then forms with it a permanent ropy fluid. When the matter spit up by consumptive patients is agitated in water, it mixes

* Hewson, on the Lymphatic System, Ch. 7.

† Gilchrist on the use of Sea Voyages, p. 130.

mixes without difficulty; and on standing a short time, a matter falls to the bottom resembling pus; and the fluid above remains ropy, resembling the mucus and water. By this easy experiment we can judge, with some degree of certainty, whether matter is expectorated, and consequently to what state the tubercles are arrived*.

There is no absolute criterion by which we can determine, when tubercles are first formed in the lungs. They are to be suspected, when the cough is violent; continued with short intermissions, particularly at night; and viscid phlegm is expectorated with difficulty. But when the cough is accompanied with coldness, succeeded by fever, and matter spit up, which precipitates in water; there is every reason to believe vomicæ are compleatly formed. A late author, not more esteemed for his great and extensive learning, than for his mild and humane disposition, has said, “ that as long as the appetite is good, and the sleep refreshing, I do not conceive the disorder can make any dangerous progress. I mention these circumstances, rather than the absence of fever, pain, or dyspnœa, because these symptoms, whenever they come on, do unavoidably affect either the sleep or appetite †.” When the complaint is in so early and simple a state, I believe the physician’s assistance is seldom applied for.

* Morgagni Sedibus & Causis Morborum, Lib, 2. Ep. 22.
Art. 28.

Cullen’s First Lines of Practice, Vol. 2. § 818-
C. Darwin’s Experiments.

Van Swieten, Comm. Aph. Boerhaave.

† Dr. Samuel Musgrave, Gulstonian Lectures, p. 99.

CHAPTER IV.

THE fever attending this disease is of two kinds. Irregularly periodical, preceded by chillness, violent, with burning heat and great thirst; or continued and generally more moderate, but increasing towards evening; both kinds being relieved by a sweat breaking out towards morning. It is always exasperated after eating, particularly of solids; with flushing in the face, and burning heat in the palms of the hands and soles of the feet.

This fever being supposed to be occasioned by the particles of pus in the lungs being absorbed and carried into the circulation, has by authors been termed a putrid hectic fever*.

That the term Putrid, can ever, with propriety, be applied to the circulating fluids, in any disease, appears to me extremely doubtful; but even in the common acceptation, it cannot be applied to any period of the Phthisis Pulmonalis; and I am certain, and have seen many melancholy instances, that an idea of putridity being taken for granted, a mode of practice has been adopted, that so far from curing, has precipitated the patient into the last stage of the disease. Of this I shall speak more fully when I come to treat of the method of cure.

“ If putridity actually took place in the vital fluids, its first effects would be, to break down the
“ texture

* Morton, Phisologia. Martin. Barry. Robinson. Symmons.

“ texture of its parts, as it does that of every other body; it must render it incapable of coagulation.” When we examine the blood drawn from patients in every period of consumption, we find no signs of putrefaction, no solution of its contents: on the contrary, the appearances are the very reverse; a thick buffy size and firm coagamentum. Nor in the progress of the disorder, do we perceive any symptoms similar to those found in diseases that are usually termed putrid; no petechiæ, vibices, sores about the teeth, or blood issuing from the gums and other parts of the body.

It has also been said, that the hectic fever is caused by acrimony in the juices, communicated by the absorption of pus from the lungs.

If by acrimony is meant bitterness, sharpness, or particles that by their angular and spiculated form, are capable of corroding, and eating away the parts they come in contact with; I must own, I do not believe the particles of pus, allowing that they are absorbed, have any such properties. It has been found in the cavities of the body in large quantities. “ The cavities of the pleura, pericardium, &c. are sometimes observed to contain considerable quantities of pus without the least mark of ulceration. Instances of which I have seen. In one patient I found three pints of pure pus in the pericardium, without any ulcer on that membrane or on the heart. In another, the cavity of the pleura on the right side was distended with a pus that smelt more like whey than a putrid fluid, and the lungs were compressed into a very small compass; but there was no appearance of ulcer or erosion, either

* Dr. Millman, on the Scurvy and Putrid Fevers, p. 54.

“ either on those organs or on the pleura, but only
“ under the pus was a thin crust of coagulable
“ lymph *.” From these instances, adduced by so
accurate an observer; it seemes evident that pus in
its natural state is not, at least in the cavities of the
body, possessed of an acrimonious or corroding qua-
lity; and if not in a quiescent state, in large quan-
tities, how much more improbable when circulating
in small particles in the mass of blood? And although
it has been observed, that a piece of meat put into
an ulcer, and covered up, was dissolved, and the
pus thereby become more foetid; it must be re-
membered that the meat was a dead inert mass,
very dissimilar from any part of the living body,
and therefore susceptible of being acted upon in a
very different manner. The substance of the tuber-
cles, and the parenchymatous substance of the lungs,
when compressed and indurated so as not to admit
the air in respiration, or the blood to circulate;
come near to the condition of the piece of meat;
and are accordingly dissolved by the pus. If this
reasoning is founded upon fact, it would seem, that
the living principle must be destroyed in any part
of the body, before it is capable of being con-
verted† into pus.

To the taste pus gives no signs of acrimony, but
is soft, bland, and inoffensive: when external tu-
mours are opened, if there is no disease in the
habit

* Hewson, on the Lymphatic System, p. 117.

† We are very sensible that pus is secreted from mucous
membranes when inflamed, and which proceeds from the exha-
lent vessels being acted upon as we have mentioned above;
here it is pus contained in abscesses which is meant.

habit, the pain and inflammation abate, and there appears no effect of acrimony.

In some cases of compound fracture lately published *, that were treated in a new and judicious manner; where the limb was rolled up, and the external air excluded, by frequently pouring on the bandage balsm: traum: and not opened till after seventeen days; when the dressing was removed, a spoonful of pure pus was found in the wound, and the granulations of new flesh under it perfectly sound, and free from every appearance of sharpness or acrimony.

Far be from me to criticise the works of others, the intelligent reader will soon be convinced how unfit I am for so disagreeable an employment; but I have dwelt longer on this part of my subject, because I know the idea of putrefaction has led to a mode of practice, replete with dangerous consequences. It has been too much the custom to make use of general terms, without appropriating to them any distinct and determinate signification; such for instance are putrid, acrimonious, nervous, and many others that might be mentioned.

From these considerations, I am disposed to believe, that there is no perceivable acrimony in the matter expectorated by persons in a consumption; and if we may judge from analogy, what the surgeons term laudable matter, is a bland, smooth, white or yellow viscid fluid; of the consistence of cream, and void of acrimony or putrefaction; that the absorption of pus from the lungs of those in a consumption is not the cause of the hectic fever; and that in the common acceptation of the term Putrid, it cannot with any propriety of language be applied

* Mudge, on the Catarrh.

applied to the hectic fever. As a confirmation of this assertion, I will just observe, that the remedies found most beneficial in those fevers termed putrid, as bark, snake-root, volatiles, cordials, &c. have been fatally found highly prejudicial in the pulmonary hectic. And in the secondary fever after the small-pox, which is usually attributed to the absorption of matter, and hence also termed putrid; were a physician, instead of evacuations, to depend upon antiseptics, he would find his error when it was too late.

CHAPTER V.

TO enumerate all the authors who have maintained that the hectic fever attending consumption of the lungs, originates from the absorption of pus, would swell this work beyond any reasonable bounds, and take up the reader's time to little purpose. But it is rather surprising, this opinion should have been implicitly adopted, without ever enquiring whether the fact was so or not; for I do not remember seeing an attempt to prove it by reason or argument. As I consider it of the utmost importance in the cure of this disease, to remove every idea of putridity; I shall take the liberty of considering this subject, divested of the venerable garb it has acquired from antiquity.

It

It is an axiom I believe will not be disputed, that similar causes will always produce similar effects.

If the fever attending consumption of the lungs, were caused by pus being absorbed, and carried into the circulation, a fever of the same kind would take place from the absorption of pus in other diseases. The contrary is known to every practitioner.

In an abscess of the liver or psoas muscle, the fever is continued, without regular remissions and morning sweats. If it is alledged, that the pus in these cases is of a different quality; I answer, that in its simple natural state, pus in all cases, is nearly the same, that is, what the surgeons term laudable matter; but as the strength and tone of the muscular fibre declines, and the disease advances, its quality is changed; and that in the Phthisis Pulmonalis, the purulent matter spit up, is of different colours and consistence, according to the period of the disease.

In recent affections of the lungs, when their substance is inflamed, and tubercles are formed, but not suppurated; the fever is continued, and similar to that attending inflammations of the pleura and other parts of the body. When the lungs become more diseased, their substance obstructed and indurated, so as not to be previous to the air in respiration; the fever changes its type; has remissions in the forenoon, and exacerbations in the evening, terminating by sweat on the breast and upper parts of the body towards morning. If the hectic fever was occasioned by the acrimony of pus absorbed from the diseased lungs, from whence does it proceed before the tubercles are suppurated, or any pus formed in the lungs?

Was the hectic fever owing to absorption of pus; it might reasonably be expected, that when a large quantity is excreted into any cavity of the body, as we have before observed, part of it would be taken up by the absorbent vessels; and being mixed with the mass of blood, produce a fever of the hectic kind; that is, with remissions, morning sweats, and wasting of the body, which I esteem the characteristic signs of the pulmonary hectic; but this also is contradicted by experience.

In the compound fracture before mentioned, when the matter was confined in the wound seventeen days, no mention is made of any fever being present.

In abscesses on external parts of the body, where a great discharge of matter takes place; and in amputations of the lower extremities, where a large surface is constantly covered with pus; the symptomatic fever, however violent, has not the most distant affinity with the pulmonary hectic.

I remember in a very uncommon case of a fractured skull, occasioned by the wheel of a loaded waggon passing over the head; where the whole scalp of the right side was torn from the bone; the wound was large, with great loss of substance. It happened in the end of July, when the weather was exceedingly hot. The symptomatic fever was considerable; and from the heat of the weather, and the patients particular situation, he had two attacks of fever in the August following, truly inflammatory and continued. The discharge from the wound was very great; varying according to the state of his health. It might have been expected, considering every circumstance, that had absorption of pus been a common process of nature, it would have taken place here; but no symptoms of hectic appeared.

peared. In ten weeks from the accident, the wound was healed, and the patient in perfect health.

From weighing these circumstances, is it fair to conclude; that if ever pus is carried by the absorbent system into the mass of circulating fluids, that it produces a fever of the continued kind, differing in essential points from the pulmonary hectic; and that this last is a fever sui generis, arising from a cause peculiar to itself?

When the venereal virus is absorbed by the lymphatics, it stops in the glands of the groin, and produces a bubo; when matter is absorbed from issues, or ulcers on the legs, it does the same. Some small glands about the inferior costa scapulæ swelled by the absorption of matter from a blister on the back*. When by an accidental wound or scratch on the fingers venereal matter has been absorbed, the glands in the axilla swell and become painful. The same happens in cases of cancer in the breast; and milk stagnating in the breasts, occasions the same affection. In the inoculation for the small-pox, the glands in the axilla of the arm where the matter was inserted, swell and grow painful before any fever takes place in the constitution. In short, wherever matter is absorbed by the lymphatics, it generally stops in some lymphatic gland, in its passage to the thoracic duct, the common receptacle of the chyle and lymph.

“ The lymphatics of the lungs are in two sets, “ one of which passes in the posterior part of each “ lobe by its root into the thoracic duct near the “ middle of the thorax, and the other set passes “ from the fore part of each lobe up towards the “ jugular and subclavian vein. Some of the lym- “ phatics on the posterior part of the left lobe pass

F

“ under

* Hewson on the Lymphatics.

“ under the aorta to get to the thoracic duct *.” If matter were absorbed by these vessels from the lungs, particularly by those passing from the upper part, which is first diseased; is it not probable it would stop in the lymphatic glands about the clavicles; and that swellings there would be a constant attendant upon the disease? whereas, except in scrophulous habits, these glands are seldom affected.

A late ingenious young physician †, indefatigable in medical enquiries, in opening the body to examine the thorax, happened to scratch his fingers in several places, with the broken ends of the ribs; the next day he opened a body, that had some symptoms of the venereal disease; in consequence of the absorption of matter from one or both of these bodies, he had troublesome sores on his fingers for some time, and afterwards glandular swellings on the back of his hands, armpits, and under the lower jaw. Those on the hands and under the jaw, were frequently cut off, and as often grew up again, and the others resisted every application for two years. During the whole time his general health was not otherwise affected, than by the medicines he used to remove so troublesome a complaint.

In low fevers that are commonly termed putrid, I have frequently met with swellings in the glands of the groin, which I was certain did not proceed from a venereal cause. Perhaps the buboes in the plague, and other pestilential diseases, are produced in a similar manner.

From the instances which have been adduced, is it reasonable to conclude; that where matter, or offending miasinata, are taken up by the lymphatic system,

* Hewson on the Lymphatics, p. 203.

† Dr. Stark.

system, such particles generally infect some lymphatic glands which are situated between the place of absorption, and the thoracic duct; and therefore, as we do not usually find swellings of the lymphatic glands, situated in the neck about the clavicles, accompanying consumption of the lungs and hectic fever; the lymphatics of the lungs do not absorb pus or purulent matter in that disease?

It has been observed, that the fluid secreted by the exhalent vessels into the cavities of the body (those of the brain excepted) and the fluid contained in the lymphatic vessels, are in every respect similar; both jellying when exposed to the air in the same given time; and both acted upon in the same manner and degree by disease. The fluid that is exhaled from the lungs in the act of respiration, agrees with the contents of the lymphatic vessels, in no respect but clearness and thinness; for it never jellies when exposed to the air, and is always of the same consistence; varying only in quantity according to the heat of the body, or disposition of the atmosphere.

As a large quantity of this fluid is discharged during respiration; are we to conclude, that either it is excreted into the air-vesicles of the lungs by a particular system of vessels; or that the lymphatics entering the substance of the lungs (if that is a fact, of which I have some doubt) do not act as absorbents?

The more we carry our researches into the structure of the human body, the more we are convinced that every part is designed, by the infinitely wise Contriver, to serve some determined and distinct purpose; and which cannot so properly be performed by any other. As the fluid secreted into the air-vesicles of the lungs, is designed to be expelled the body

body by means of the atmosphere in the act of respiration, which is continued without intermission during life; it does not seem necessary that any system of vessels should be adapted for re-conveying it into the circulating fluids, from whence it had just been secreted.

CHAPTER VI.

HA VING in the two former chapters endeavoured to prove, that the hectic fever attending on pulmonary consumptions, was not occasioned by the action of acrid particles, absorbed from pus in the lungs, upon the mass of circulating fluids. I shall now, with the reader's indulgence, proceed to lay before him, what I imagine to be the true cause of that fever. How far this theory, which I believe is perfectly new, may be found consistent with just pathological reasoning, becomes not me to determine. I shall deliver my sentiments, with as much clearness and brevity as the subject will admit.

It has been computed that a greater quantity of perspirable matter is discharged by the lungs, than by the whole surface of the body *. The insensible perspiration

* " But taking the whole year round, the perspiration, made by the skin and lungs, exceeds their absorption by " about

perspiration passes off from the pores of the skin, without our being conscious of it; but when any increase of that discharge takes place, either by exercise, warmth, drinking warm liquors, or taking sudorific, and therefore heatning, medicines, the pulse is always accelerated, and a temporary fever precedes.

When the lungs, from inflammation, or the formation of tubercles and vomicæ, are rendered in part

“ about forty ounces a day in Great-Britain; which, though
“ it has been commonly reckoned the total of the perspirati-
“ on, is really no more than its excess above the quantity of
“ fluid taken in by the absorbent veins of the skin, fauces,
“ and lungs.”

Whytt, Motion of the Fluids, p. 250, 4th ed.

“ When we endeavour to expire with all our power, the
“ whole surface of the vesicles of the lungs may sustain a pres-
“ sure equal to 420 pound weight.”

Whytt, on Vital Motion, p. 41.

Dr. Hales (Hæmest. vol. 2.) supposes the sum of the areas of the vesicles of the lungs to be equal to 150 square feet, which is infinitely more than the surface of the body; that being estimated at only 15 square feet. He supposes two gallons of air, breathed to and fro for two minutes and a half, becomes unfit for respiration. That quantity is equal to 522 cubic inches. In the two minutes and a half he breathed fifty times; and found the moisture conveyed from his lungs in that time to be equal to seventeen grains; which in twenty-four hours amounts to twenty ounces, three drachms, and twelve grains. But this must vary according to the quickness of the circulation and the condition of the atmosphere, being more or less capable of dissolving moisture. For, according to Professor Hamilton, in his Phil. Essays, the common atmosphere has the property of dissolving moisture in the same manner as water dissolves sugar and salt; that it dissolves most when in action, and when so dissolved the clearness of the air depends upon its warmth; for cold will precipitate it again in the form of vapor or mist, as may be proved by breathing in a warm room, and in the frosty air; in the latter the breath is visible, in the former it is not.

part impervious to the air in inspiration ; the usual quantity of fluid cannot be carried off by the action of respiration ; the quantity so retained will remain in the habit, till excreted by some other emunctory. That quantity of fluid so retained in the habit, I conceive to be the great and principal cause of the hectic fever, which invariably abates, as soon as it is discharged by the pores of the skin : and as the impediment to its exit by the lungs continues ; so the fever is daily renewed, that the constitution may be relieved from its accumulated burthen. As the lungs become more and more unfit for exhaling the usual quantity of lymph, we find the morning sweats proportionably increased, and the exacerbations of the fever more violent ; till towards the close of the disease, when the patient's strength is so exhausted, and the muscular force, and action of the vessels so much weakened, as probably to be unable to produce, such a degree of fever as is necessary to force the fluid through the pores of the skin ; it falls upon the intestines, and produces a diarrhœa. From being usually costive, the patient has frequent motions in a day ; till in a short time the purging becomes confirmed : we then find the fever and sweating considerably diminished, and the expectoration of purulent matter in less quantity.

The spitting abating, as the diarrhœa advances, seems rather to proceed from the greatest part of the substance of the lungs being dissolved, than from the pus being absorbed, and running off by the bowels ; add to this, that in the latter period of the disorder the patient has scarcely sufficient strength to cough it up.

In those who have died of this disease, the portion of the lungs remaining pervious to the air is so small,

small, as not to exceed a fourth part of their substance *.

We have observed that the fever abates upon the breaking out of the morning sweat; yet a certain quickness of the pulse continues even in the intervals; probably occasioned by the progressive inflammation of one set of tubercles after another; of this the patient is sensible by the pain and soreness, particularly on every full inspiration, and even motion of the thorax.

“ The principal use of respiration,” according to the opinion of a learned and ingenious author, “ is

“ * “ Et quæ mirabilior est Marcij Gerbezij, qui cundem pulmone dexterum totum, una cum aspera arteria præ putridine in pultem collapsum, deprehendit. Et quanquam Jostackius ita vidit plane corruptum, ut latus dexteram pulmone destitutum fuisse, scriperit: majori temen admiratione afficeret Cl. Ritterus junior qui in sinistro latere alba purulenta materia ad medium usque repleto tradit, pulmonis illius, qui totus fere erat consumptus, oscula vasorum fuisse aperta; nisi Celeberr. Anatomicus Hallerus confirmaret, multum aquæ, subfœtidæ, albuminis instar viscidæ, offendisse, in eaque arteriam asperam, et vasa majora arteriosa, et venosa quasi resecta, patulo fine hiantia, ut sanguinis effluxum quid moraretur, ægerrime invenires. Nam Platerus qui non semel in Phthisicis nihil penitus de pulmonibus alterius lateris supersuiffe, deprehenderat, callo saltem aliquo vasa cordis quæ illuc pertinebant, et arteriæ ramos obturata conspexit, quemadmodum in hac 7^{ma} Sepulchreti ectione leges. Sic Columbus inveni, inquit, partem thoracis pulmone destitui, hocest, minimam pulmonis portionem adesse: quod vero reliquum erat cavitatis, ab aquo humore occupabatur. Sic alias quoque Valsalva, cuius alibi proferetur observatio, nullum primo aspectu esse credidit pulmonem; adeo submulto humore contractus erat! Sic, ne longior sim; laudatus Hallerus in hydrope pectoris pulmones vidit adeo compressos et inatos pleuræ, ut nullos adesse incauto videretur, certe tribus lineis vix crassiores.”

Morgagni de Sedibus et Causis Morborum,
Lib. ii. Ep. 22. art. 7.

32. AN ESSAY ON THE

“ is to carry off the phlogiston which the blood
“ acquires during its circulation through the
“ body *.” We have always known, that air by
frequent respiration in time became unfit for the
purposes of life †; and that if any animal were shut
up

* Dr. Priestly.

† By some ingenious experiments lately published on this subject, it was found that a person by breathing one hour into a bottle containing three pints and a half, he collected in that time 124 grains of moisture, which makes 6 oz. 1 dr. 36 grs. in 24 hours. It is to be observed, that the three pints and a half of air would soon become saturated with moisture, and although it was condensed on the sides of the bottle, yet as fresh air was continually thrown in, the air in the bottle must of course escape to give it room—and as all the moisture would not be condensed, a great part would escape by that means—consequently a much larger quantity of moisture is excreted by respiration than is here supposed. See Cruikshanks' Letter upon Absorption, p. 116.

The Abbè Fontana could only breathe 40 times in 352 cubic inches of air. (Ph. Trans. vol. 69.) Supposing we expire 20 times in a minute; in the above hour, near 50 gallons of air must have passed into, and out of the bottle,—but if we allow 30 cubic inches to pass into the lungs * at each inspiration, the quantity will be more than three times as much.

* Cavallo on Air, p. 391.

Putrid effluvia, in some cases of diseased habits, is expelled from the lungs by respiration.

Tib. Cavallo, Treatise on Air, &c.

A man perspires in a day five eighths of what he eats and drinks.

Sanctorij, Med. Stat. Aph. 6. Sect. 1.

Insensible perspiration is double the quantity of the sensible, and that is ten times greater than the evacuation by stool.

Sanctorij, Med. Stat. Aph. 59. Sect. 1.

The ingenious Mr. Cruikshanks found, that by confining his hand in a bottle, he collected in an hour 30 grs. of moisture; which, supposing the whole surface to perspire equally, he estimates at seven pounds six ounces in a day. He was at rest, and the thermometer at 71° in a room—after using

up in a cube of the greatest dimensions, and the external air perfectly excluded; in a certain proportionate time it would perish, by the contained atmosphere becoming unfit for respiration. But it has generally been supposed, that a certain principle was extracted from the air, necessary to animal life; as well as the air being saturated with moisture from the lungs. The new doctrine of phlogiston, seems to view the argument from a different point.

Now, whether the air attracts phlogiston from the blood; whether the blood attracts the pabulum vitæ from the air; or whether the air becomes saturated with moisture from the lungs; in either case, whatever principle the blood communicates to, or attracts from the inspired atmosphere, that will be diminished, in proportion as the vehicles of the lungs become impervious to the air. If that principle is phlogiston, (and the supposition seems well founded) will not its retention in the circulating mass of blood be an occasional cause of fever? View the argument in any light; as it is absolutely necessary for the purposes of life, that the blood, after receiving the chyle and lymph, poured by the thoracic duct into the left subclavian vein, should pass through the lungs; it is very certain, when the passage is impeded by the diseased state of that organ, it will become the cause of fever.

It is no objection to this reasoning, when the disease is cured, and a small portion of the lungs only remains, that the circulation of the blood will be equally impeded; since we know that nature possesseth

G

using exercise, it amounted to 12 pounds a day. In the evening at nine o'clock, the thermometer at 62° , he only collected 12 grs. in an hour.

Letter on Absorption, p. 112.

possesseth a wonderful power of accommodating herself to different situations.

If the hectic fever were occasioned by the absorption of pus; from whence does it arise, before any purulent matter is collected in the lungs; since we very often find it completely formed, when no pus is expectorated? And if the fever and morning sweats increase in proportion as the substance of the lungs, becoming impervious to air, is dissolved; is it not reasonable to conclude, that they are occasioned by the retention of that fluid, which in health was carried off by the atmosphere, in respiration; and probably increased, by the retention of the phlogiston, which the blood used to part with to the air *?

In the hectic fever occasioned by abscesses in the liver, ad psoas muscle, and other parts of the body (as has been before observed) we do not find that it has remissions and morning sweats like the pulmonary hectic; on the contrary, it is continued, less violent, and the skin usually dry.

When the diarrhoea takes place in the advanced period of the disease; the lungs are considerably reduced and wasted, more than half their substance having been dissolved into pus and spit up. If this symptom proceeded from the absorption of pus, why does it not appear more early in the disease, when there is a greater extent of surface covered with matter, and when a larger number of the absorbent vessels remain uninjured? whereas we find

the

* "The air in the lungs acquires a quantity of phlogiston from the blood, which discharge of phlogiston is absolutely necessary to the continuation of animal life, and which in time renders the air incapable of absorbing any more, and consequently unfit for respiration."

the hectic fever and colliquative sweats continue, till toward the end of the disease, when the lungs are so much reduced as we have mentioned. Surely, if absorption of pus were the cause of the diarrhœa, it would rather take place sooner in the disorder, when the lungs are, as it were, drowned in purulent matter, and the lymphatics remained in a great measure uninjured ; than at a period when they are reduced in the proportion of four to one !

Let us for a moment suppose that the fever is caused by absorption, and see if we can satisfactorily account for the symptoms by that theory.

Allowing matter absorbed to cause the fever, from whence proceeds the regular intermissions in the morning ? Is not that system of vessels always in a state to absorb matter continually applied to their extremities ? As it is most reasonable to think, they would act with greatest vigour, when the body is at rest in bed ; when the lungs are agitated with the cough, forcing as it were the matter into their apertures ; and when there is the greatest quantity of pus collected ; would not the fever be consequently more violent in the forenoon ? Whereas we find it goes off about four or five in the morning, and the remission continues till about noon. What can the absorbents be doing all this time ? If it was the property of these vessels to take up pus, they would continue to do so, whilst there was any applied to their extremities ; and if that absorption occasioned the fever, it would be continued like its cause.

If the diarrhœa was also caused by absorption, the matter must pass by the circulation, and consequently the same fever be raised as when the offending cause was removed by perspiration ; for matter cannot get from the lungs, to the intestines by any other passage. But, supposing, by our mode of reasoning,

reasoning, the retained fluid occasions the diarrhoea ; such a fever is not necessary ; it being consistent with the œconomy of nature, to relieve herself by the intestines, without raising any commotion or disturbance in the habit.

When we consider that pus is a viscid, opake fluid, specifically heavier than water ; it does not seem adapted to enter capillary vessels, whose apertures are so small, that in the intestines, where they are in greatest number, they are not perceivable when empty, with the best glasses.

The more I consider the subject in this light, the more the difficulties appear to be insurmountable.

On the other hand, it has been computed that a person in common health exhales from his lungs more than twenty ounces of fluid in twenty-four hours. If from disease any part of that fluid is retained in the habit, is it not consonant to the laws of nature, that a fever should be raised to expel it, by the most common outlet, the pores ; and that this fever should continue till the cause is removed ? That in consequence of the morning sweats, the fever goes off, and the remission continues some hours ; till the former cause accumulating in the habit, it is again excited, and runs the same course as before. As the disease in the lungs advances, a greater quantity of the lymph will be retained, and we find the fever and morning sweats proportionably increase in their violence and duration. Till at length, the natural strength of the body being so much reduced as to be incapable of raising the fever necessary to the expulsion by the pores ; it then, by the usual sympathy subsisting between the skin and intestines, falls upon the bowels, and produces a diarrhoea. In consequence of which, the fever

fever and perspiration being no longer necessary, in a short time are considerably diminished.

This appears to me a plain, simple, and natural manner of accounting for the pulmonary hectic fever, and subsequent diarrhoea; and I must have been very unfortunate, if I have not convinced the intelligent reader, that the absorption of purulent matter is no ways concerned either in occasioning or continuing these complaints. But that they are originally caused, and continued, by the retention of that quantity of phlogiston and lymph in the habit, which by the diseased state of the lungs, is prevented being expelled by the atmosphere in respiration.

CHAPTER VII.

THE authors who have written upon consumption of the lungs, generally agree, that it admits with difficulty of a cure even when recent, but in the advanced stage, that for the most part it terminates fatally. There is no doubt, but this opinion is founded upon experience; every day evinces how little this disease is under the power of medicine. But I cannot believe, the disorder in its own nature is attended with so much danger; and am disposed to believe, this opinion of its fatalness, being so generally received, has weakened the efforts of the

the physician; and instead of attacking the disease in its strong hold, he contents himself with palliatives, and consigns his patient to country air, butter-milk, and boiled apples.

In the works of surgical writers, we have instances of wounds in the lungs being cured with less difficulty, than those of any other viscus; and we have absolute proof from dissection, of Phthisis being cured in its advanced stage, when one entire lobe of the lungs, and that the largest, had been consumed by the disease *.

Complaints in the breast, when taken in time, are easily removed; but their frequency in this variable climate, renders them so familiar to the inhabitants, that they seldom think of seeking advice, until the disorder has made considerable progress. The number of infallible remedies stored up in every family, also tends to preclude the physician; and when he is called, it is inconceivable with what difficulty he gets his directions, in any degree complied with. Those who can labour incessantly to acquire wealth and honour, can scarcely be persuaded to give themselves any trouble in regaining their health, the greatest of all blessings; and without which all others lose their value. On the other hand, pleasure and dissipation, raise powerful barriers against medical restriction. When people are slightly indisposed, and able to go abroad, they are not easily persuaded to forego, what they esteem a present good, in order to avoid a distant, and what they think, an uncertain evil.

These

* Mudge, in his Treatise on the Catarrh, mentions a man who died in St. Thomas's Hospital, after having perfectly recovered from a consumption of the lungs, for which he was in the hospital formerly. The body was opened, and only the left lobe of the lungs was found remaining, the right having been entirely dissolved.

These are the causes that render pulmonary consumptions so difficult to be cured, and not the nature of the disease; which from experience, I am warranted to say, is curable at any period, before the vital strength is greatly broken down, and the stomach and digestive faculties rendered incapable of assimilating nourishment*. There have even been instances of recovery after the diarrhoea has been confirmed; and if we reflect on the wonderful powers of nature, in removing the cause, and obviating the effects of disease, it will be difficult, and perhaps imprudent, for any physician to determine what is incurable.

The general intention of cure is, to obviate the occasional causes of fever that may be lodged in the stomach and first passages; to remove obstructions in the hypochondriac viscera; to evacuate the purulent matter from the lungs; to appease the cough, and to give rest to the tender inflamed lungs; to regulate air, exercise, diet, and the passions of the mind.

The recent effects of cold are so well understood, and may be so easily removed by bleeding, diluting drinks, abstinence, and the usual antiphlogistic plan; that any directions to that purpose would be insulting the medical reader's understanding.

When from a bad habit of body, or neglect, the cough remains obstinate and dry; with pain in the breast, stitches in different parts of the thorax, increased upon coughing, and attended with a considerable degree of heat and fever; I would recommend

* " Atque hinc sit, quod Phthisis vulgo tam malè audiat, ac
" si esset morbus naturā suā prorsus incurabilis, quum (qua-
" tum ego longā experientiā edocetus scio) æquè certam cura-
" tionem, atque alii morbi admittat, modo debitā methodo,
" satis tempestivè tractetur."

mend bleeding in a moderate quantity, and to be repeated at proper intervals, till these symptoms abate, if there is nothing in the strength or pulse to forbid it: in this period of the disease, the patient usually bears the repetition of the operation without any bad consequence. The body is to be kept open with gentle saline purgatives, drinking frequently of barley-water or lintseed-tea; and if the cough prevents sleeping, a proper dose of Elixir Paregoricum at bed-time, will have a good effect. But the remedy which I have found most effectual in every kind of cough, and in every period of this disease; is such a dose of the Pulv: Ipecac: as will excite vomiting once or twice; and this I repeat morning and evening, as the strength of the patient and violence of the complaint may indicate*. I by no means approve of vomits given in the usual manner; that is, a full dose in the evening, which will operate eight or ten times; as they greatly fatigue the patient, and very frequently aggravate the symptoms.

The sympathy subsisting between the stomach and other parts of the body, has been described with great precision, by the late learned Dr. Whytt, of Edinburgh, in his treatise on nervous diseases; and that ingenious work being in every one's hands, it will be unnecessary for me, to repeat them here.

The

* “ Vomitoria lenia debitum intervallis repetita, (præsertim
 “ verò si cum *expozice* ferantur, neque nimis ferò exhibantur)
 “ multum ad hujus phthisicos curationem promovendam con-
 “ ferunt; utpote cerebrum et genus nervosum deoppilantia, et
 “ Rheumaticos dolores minorantia rigiditatem et stuporem fi-
 “ brosi generis universaliter sublevando; quo fit ut causa Pro-
 “ cataracta, seu fons hujuscē Phthiseos, plurimum subtra-
 “ hatur.”

The lungs, from their contiguity, will be affected in a peculiar manner, by whatever is received into the stomach ; whether from the quantity or quality of the matter *. When a large quantity of food is received into the stomach, during the process of digestion, the air contained in it, being set at liberty and rarefied by heat, that organ will be distended ; and by pressing the diaphragm upwards, the cavity of the thorax will be lessened : consequently the lungs, being confined in a smaller space than usual, will be incapable of being expanded by the inspiration of the air ; and thereby the motion of the blood through the pulmonary artery and vein impeded. If the lungs are diseased, the cough will be considerably aggravated ; hence asthmatic patients find their difficulty of breathing increased after eating, and during digestion. If from the quality of the food, whether acrid, acid, or affording a quantity of rarefied air, the nerves of the stomach are disagreeably affected ; that sensation will, by sympathy, be conveyed to the nerves of the neighbouring parts : and when any part of the body is in an inflamed state, the nerves of that part acquire an increased degree of sensibility and irritability ; therefore the lungs, when in an inflamed state, will be sensibly affected by the contents of the stomach. And I am disposed to believe, that whenever any of the hypochondriac viscera, are in a diseased state, be it more or

H

less ;

* " Cui ut in illo casu non refragemur, nec in aliis fortasse,
 " in quibus multo prius ab exteriore illa causa læsiones ven-
 " triculi quam pulmonem, animadvertantur unde male cibo-
 " rum confectione viscidos, acrefve succos paret, qui et sto-
 " machum vellicando, tussim excitent, et in pulmonibus tan-
 " dem subsistendo, irritandoque, causam præbeant phthi-
 " sis."

les ; the lungs when inflamed will be affected. And even when the lungs have been perfectly sound, acrid matter in the stomach and bowels, has caused, and kept up an obstinate cough.

As we are so easily and quickly affected by taking opiates, cordials, and poisons into the stomach, by the action of their particles on the nerves and lymphatic vessels ; is it not reasonable to conclude, that different parts of the body will also be affected by offending matter irritating those nerves ?

Opiates taken into the stomach quiet a cough ; their effects being conveyed to the nerves of the lungs, by means of sympathy with those of the stomach : in the same manner, coughs are excited by different matter acting upon the stomach, and by the same sympathy upon the lungs.

In the whooping-cough it is well known, what sensible effects are produced by repeated vomiting ; and indeed there is no other medicine that can be depended upon, in that distressing complaint.

By giving emetics in the manner I have recommended, not only the contents of the stomach are evacuated, accumulation of viscid phlegm and acrid bilious matter prevented ; but the lungs being compressed during the action of vomiting, whatever mucus and purulent matter are in the ramifications of the aspera-arteria and air-vesicles, in tubercles or vomicæ, will be forced out and discharged ; by which means an infinity of laborious coughing is prevented ; the patient feels greatly relieved, and the tender lungs remain at rest, till a fresh accumulation of matter is formed, which requires some time.

By the universal concussion and agitation caused by vomiting, obstructions in the liver, biliary vessels, and in other hypochondriac viscera, are attenuated

tenuated and removed * : and in all complaints arising from these causes, it is the most powerful and certain alterative, that can be found in the whole *materia medica* †.

People at first, are apt to be alarmed at the novelty of the practice ; fearing that by taking vomits every day, the tone of their stomachs will be injured ; but I can safely affirm, and I am warranted to do so, by the best of all tests, experience ; that I never saw any bad effects from a course of this kind continued for many weeks, with proper precautions ; on the contrary, I have scarcely met with one instance,

* Dr. Barry observes, " These intentions may be better answered by gentle stomachic purgatives, and other attenuating medicines." (On Consumptions of the Lungs.) If we attend to the operation of cathartics on the human body, we shall be convinced that their action upon the stomach is very slight, and principally confined to the intestines. Whatever disease originates from the stomach, cannot be removed by the use of purgatives, unless an emetic precedes. Of this we have frequent instances in cases of diarrhoea.

† " Maxime momenti est post extractionem sanguinis, præcipue autem si morbus à crapulâ ortum suum ducat; vel si nausea et vomendi dispositionem conjunctas habet, Emetici cum lene præscribere è melle, vel Oxymelite Scyllitico; immò et aliquandò è Vino benedicto modicâ quantitate sumpto. A quâ vomitione, non tantum ventriculus humorem sanguinis oppressus relevari, et nausea inde nata tolli, et digestio restituti possint, (quæ omnia non sunt flocci habenda;) verùm etià moles humorum jam pulmonibus impacterum, harum partium exagitatione inter vomendum insigniter expectorari solet, unâ cum notabili relevatione ponderis gravitavi à mole istâ effecti. Atque hoc ritu non tantum plurimos empiricos vidi, cum successu felici, sese omnem incipientem Phthisin curaturos gloriari, verùm etià ipse ego ratione, & experientiâ fretus sèpissimè Phthiseos incipientis progressum, eodem modo, brevi temporis spatio præpedi- vi."

instance, where the general health was not essentially improved.

I prefer the Pulv: Ipecac: to any other medicine of that class, because its effects are more certain and less violent, and it has a tendency to keep the body open. I usually begin with a small dose, according to the age and circumstances attending the patient, and increase it as I find occasion. An ingenious author on this subject *, has recommended the Vitriol: Rom: because it acts quickly. I have not had any experience of this medicine myself; but am inclined to think the emetic has had the most permanent good effects, when it remained some time in the stomach, before it operated.

In the early period of the disease, I sometimes order a small quantity of tartar emetic, especially if I suspect bile to be collected in the first passages; but its effects are so uncertain, and sometimes uncommonly violent; perhaps depending upon the contents of the stomach, that I seldom use it, and never in the advanced stages of the disease. During the operation, unless the patient strain much, it is not necessary any thing should be drank; and as the quantity given only excites vomiting once, or twice at most; even when much reduced, they do not find themselves fatigued by it. However violent, and unnatural the action of vomiting may seem, and really is; it is well known not to weaken the habit and reduce the strength near so much, as a common purge, even when the vomit is taken in the usual method †.

I continue this medicine through every stage of the disease; repeating it once or twice a day, as the strength

* Dr. Fort Symmons.

† "Vomiting is a general stimulus, and gives a shock to the whole machine. In consequence of exhibiting emetics, the

strength of the patient and urgency of the symptoms may require. In the morning I order it to be taken fasting, and, if the patient is weak, in bed; but not to sleep after it, as that sometimes prevents its action on the stomach. It is seldom I find the repetition necessary in the evening; when it is, care should be taken that the operation may be finished before bed-time.

If the cough is so violent as to prevent sleep; a dose of Elixir Paregoricum should be taken going to rest, and repeated in the middle of the night, if necessary: it being essentially requisite to keep the lungs as quiet as possible; as the agitation of coughing not only fatigues the patient, but increases the inflammation, and hastens the suppuration of the tubercles. This indication is most effectually answered by the repeated vomits, which I have rarely seen fail. And even the constitutional, annual coughs, that old people are subject to every winter; I have frequently seen removed by this means in a short time.

The lungs differ from every other part of the body in many respects, but particularly in the following. Their substance is more vascular, and a greater quantity of blood passes through them in a given time. The aspera-arteria minutely ramifying through every part of their substance, terminating in air-veficles, is peculiar to them. And by respiration they are kept in a perpetual motion. These differences subsist through life, in sickness and in health.

When

" the water of ascites has sometimes been removed; and when
 " the cure has been effected from the constitution itself, vo-
 " miting has frequently been the method employed by nature,
 " for keeping up and increasing the absorption."

Cruikshank's Letter on Absorption, p. 166.

When the lungs are diseased, their motion is not only increased by the respiration being quickened; but they suffer, for the most part, violent concussions by means of coughing. This circumstance attending no other viscus, renders such disorders more difficult to cure; for all authors agree in this; that rest is absolutely necessary to parts when inflamed.

If by any means the cough could be prevented; I presume diseases of the lungs would be nearly in the same state, and admit of a cure as readily, as any other internal part, equally inflamed. The increased frequency of respiration does not appear to me, in these cases, of great importance; because it is both natural and familiar, as it takes place upon any exertion, or quick motion of the body.

When the cough in consumptive cases, has continued any length of time; it either proceeds from affection of the alimentary canal and hypochondriac viscera, acting by sympathy upon the lungs; or from mucus and purulent matter lodged in the air-vesicles, and branches of the aspera-arteria, by irritation exciting incessant coughing till it is discharged. The consequence of this reiterated concussion is, that the disposition is continued in the exhalent vessels, of secreting viscid lymph, or purulent matter; by which the latter tubercles are dissolved, and new ones formed: and also, by the general pressure, the parenchymatous substance is condensed and rendered capable of being melted into pus.

The exciting cause in the first passages, may with certainty be removed; and those in the lungs greatly, if not entirely obviated, by the frequent use of gentle emetics, given in the manner we have directed. And when the cough is prevented, or even considerably alleviated, the inflammation will readily

ly disperse ; the immediate cause of its continuance being removed *.

By this means the stomach and first passages ; the biliary vessels and hypochondriac viscera ; will, by the frequent concussions and agitations during the action of vomiting, have their obstructions attenuated, and removed ; their secretions will be restored to a natural state ; digestion will be properly performed ; good chyle will be produced ; and consequently the blood will be mended, the body nourished, and health again be established. And, as I am disposed to believe, the major part of the diseases, incident to mankind, originate from a morbid state of the stomach and bowels ; our curative indication should be directed primarily, and principally, to remove from them every exciting cause †. When that is done ; Nature will exert that wonderful power, with which the omnipotent Author of the universe has endowed her, of restoring the parts of the body to a found state.

As emetic medicines are known to be powerful and active agents in the constitution ; they should be used with great caution and attention. The judicious physician will weigh, and consider the symptoms and situation of the patient ; and although there are few cases in which they may not be given with safety ; yet he will sometimes find them improper. During pregnancy, in delicate women, though they

* " If any remedy is capable of dispersing a tubercle, I believe it to be vomits."

Dr. F. Simmons, on Consumptions, p. 66.

† This subject was intended by the author, to have been considered at large in a work he was preparing for the press. But his other avocations not allowing him time to render it in any way fit to appear before the public ; he has laid it aside, at least for some time.

they frequently vomit spontaneously ; emetics, as they act in a different manner upon the system, are very apt to occasion abortion ; especially in the early period. In such cases, I would advise them to be entirely omitted.

In schirrous affections of the stomach, emetics are highly improper ; and in many other diseases, which being well known to every practitioner, need not be enumerated here.

Some people vomit with great difficulty, and are acted upon in a particular manner by medicines of this kind. I therefore, as a general caution, recommend, to begin in all cases with a small dose ; repeating it, according to the effects upon the disease, at longer or shorter intervals : and whenever it is found to disagree with the patient, its use must be discontinued, or omitted altogether. But in the course of my practice, such instances have very rarely occurred.

CHAPTER VIII.

WHEN purulent matter, or pus, is mixed with the mucus in the expectoration ; I am very cautious in ordering the bleeding to be repeated ; except when the fever runs high, the pulse full and hard, with frequent pains and stitches in the breast and sides. Then it may be done with safety ;

safety * ; always attending carefully to the patient's strength, and not to the appearance of the blood, which is so apt to mislead unwary practitioners.

In no disease has bleeding been so generally ordered, and so frequently repeated in a given time, as in that under our consideration ; and I fear the observation has been but too much verified, " that more die by the lancet than the lance †." In the early period of the complaint, when the cough is dry, hard, and frequent ; with pain, soreness, and stitches in various parts of the thorax ; the pulse hard, quick, and full ; the breathing short, with pain and difficulty ; bleeding is an appropriated remedy ; and may be repeated according to the symptoms, with great safety. But performing this operation two or three times, or oftener, in a week, as is frequently done ; I am convinced answers no good purpose ; but on the contrary weakens the patient, draws off that strength he so much wants in combating the disease, and greatly accelerates the fatal period.

When the patient spits up purulent matter ; when the hectic fever, with remissions and morning sweats, are confirmed ; when the flesh is wasting away, and his strength visibly decaying ; whatever may have been the appearance of the blood in a former operation, withhold the lancet, or his life will flow out at the orifice.

I

The

* " Nec quidem ipso Venæfæctio hinc convenit, nisi ad præcavendam inflammationem Peripneumonicam, quoties scil. à dolore Pleuritico, potatione liberaliori liquorum spirituorum, à frigore recens percepto, atque aliis ejusmodi, medico sagaci eam præ foribus esse suspicari liceat. Atque tunc etiam sanguis, ob tabem præsentem et virium languor, parcè potius manu ventilandus, quam profuse extrahendus."

Morton, Phthisiologia, p. 174.

† Dr. Armstrong.

The celebrated Boerhaave, and other eminent authors, recommend bleeding to be repeated while the buffy crust remains upon the blood, considering that as a criterion of inflammation * ; and this practice has been pretty generally followed, particularly by the lower order of the profession. No appearance can be more fallacious than the size upon the blood ; because it frequently happens, when it is received into several cups, one or two of them shall have it, and the others not. In pleurisies, the blood will sometimes be free from size, and yet the complaint continue †. In pregnant women the blood is generally fizy, when no disease is present. And therefore, it is far from being an incontestible proof of inflammation.

Contrary to the received opinion, inflammation is found to thin the blood, and particularly the coagulable lymph ; by which means the red particles are precipitated to the bottom of the vessel, and the lymph remaining above, forms what is termed size or buff ; the density of which, when jellied, is in proportion to its previous thinness. It is supposed to be occasioned by the action of the vessels upon the blood ‡.

I by no means would be understood, that bleeding is never proper when pus is expectorated from

* Aphor. 1199, 1200. in Hæmoptoe.

In quocunque morbi generere sanguinis missi et refrigerati superficies, pellis albæ, duræ, similitudinem induit, indolem inflammatione comitataam denunciat, et rarò sine repetitâ hujusmodi exinanitione sanatur iste æger ; cæterisque paribus, ex hac solâ re cognoscatur aliquo modo inflammationis gradus.

Cl. Wintringham, Quibusd.
Morb. Comment. § 62.

† Dr. Heberden, Med. Transf. Vol. 2. p. 499.

‡ Hewson on the Properties of the Blood.

from the lungs ; many cases and circumstances occur, in which it is highly expedient. But in treating the subject in general (and it is impossible to particularise every variation in the symptoms) I wish to enter my caveat against the frequent repetition of the operation, as a means of cure.

I am very sensible how much, in this, I differ from the most eminent in the profession. Men not more distinguished for learning and knowledge ; than for liberality and humanity. But were we implicitly to follow authorities, even of the highest reputation ; all improvement would be precluded, and the science, like the arts in China, remain for ever at the same point of imperfection.

The transient relief experienced from repeated bleedings in the advanced stage of the Phthisis Pulmonalis, proceeds from the vessels being emptied, and for a short time the breathing being less oppressed ; as it reduces the strength of the muscular fibre, the action of the vessels will be weakened, and the circulation become slower.

Bleeding is certainly a most effectual and valuable remedy, in this, and many other deseases ; but it is used too indiscriminately in this great city ; where those of the true inflammatory kind seldom occur.

CHAPTER IX.

FR OM the supposed efficacy of gums and bal-
fams on external wounds and sores ; it was
imagined they would have a similar effect when
taken internally ; and from the idea of there being
an open ulcer in the lungs, medicines of this kind
have been given constantly, and in great quantities,
in consumptions of the lungs.

In some authors, particularly Morton, the class
of pectorals, demulcents, attenuants, incrassants, &c.
is so extensive, that he seems to have copied the
whole pharmacopœia. I am disposed to believe,
that the constant and indiscriminate use of greasy,
oily medicines in diseases of the breast ; so far from
producing any real benefit, frequently do much
harm. The patient depending upon their supposed
virtues, wastes that time he might so much better
employ. They relax and foul the stomach ; and
from their disposition to become rancid and acrid,
increase that complaint, they were meant to relieve.
It has been said *, " that oily linctuses and anodyne
" medicines act by supplying an artificial defence to
" the aspera-arteria, which is abraded, and de-
" prived of its lubricating mucus, and thereby be-
" comes exceedingly sensible to cold air, or the
" acrimony and heat of the humours distilling from
" the glands." This is the common received op-
nion ;

* Barry, p. 218. Friend, art: Lohock.

nion ; but it will be found without foundation, when we enquire by what means these medicines are to get to the parts so abraded. The least particle getting within the epiglottis, causes incessant coughing ; and he surely cannot mean, that they should go the round of the circulation.

In catarrhal tickling coughs ; where a thin rheum falling continually upon the fauces and epiglottis, irritates the parts, and excites frequent coughing ; by which the natural mucus that covers them is washed off. In this case, soft oily medicines, so far as they tend to supply that mucus, and defend their surface, may be of service. The usual forms are oily emulsions, linctuses, mixtures with spermaceti, &c. : but as these compositions in some measure constantly injure the stomach ; I prefer a solution of Gum Arabic, or a mucilage of Sem: Cydon: with a proper quantity of Syr: Emecon:. These will be found to answer every purpose intended by oily medicines, without any of their offensive qualities. Further than this, I presume pectorals can do no real service in diseases of the lungs. Some transient relief may be imagined in their passage down the œsophagus into the stomach, by their coolness giving a new stimulus to the trachea ; but experience will soon convince, that no permanent relief can arise from taking them. From the mouth, they pass immediately into the stomach, where they mix with its contents ; from thence into the intestines, and whether any of their particles are taken up and carried into the blood, is a matter of much doubt ; certainly not in that proportion as to act in the nature of a healing balsam to the diseased lungs.

The idea of oily, and viscid fluids, cloathing the particles of acrid matter, in the stomach and bowels ; so as to prevent their irritating or vellicating the fibres, seems more imaginary than real. Particularly

cularly in the stomach, where there is so frequent an ingress and egress, of solids and fluids; the small quantity of medicine taken for that purpose, does not seem adequate to produce the effect. For if the acrid, or offending matter, was in such a quantity, as to be enveloped by a few ounces of an oily emulsion or linctus, taken in the course of a day; it would not be sufficient to injure the health.

I have frequently experienced good effects from the use of squills, in humeral asthmas, and coughs without inflammation; but as they are usually united with opium, great part of their effects must be attributed to its anodyne quality: and their promoting expectoration, arises from stimulating the stomach, and sometimes exciting vomiting.

The terebinthinate balsams and gums, come under the same predicament; very few of their particles passing into the circulating fluids; and those more apt to increase, than alleviate the complaint. When any relief has been found from their use, in asthmatic cases, it proceeded from their warmth giving a gentle stimulus to the stomach; and sometimes from their opening quality.

The intelligent reader may imagine, these observations useless and superabundant; at a time, when the medical science is so much improved, that hot balsams and turpentine are seldom given in diseases of the lungs, and never relied upon. But I have lately, more than once, seen patients with a considerable inflammation on the breast, tightness, pain, cough, and difficulty of breathing, with a full and quick pulse, swallowing boluses of Balsam: Locatelli. This is a composition of olive-oil, bees-wax, and turpentine; the last, in the proportion of one to four. Nothing but seeing and receiving the fact from the patients themselves; could have

have convinced me it was possible, such a substance could at any time be taken medicinally ; far less under such circumstances. These and many other reasons, have convinced me, that oily and balsamic medicines, so far from producing any permanent benefit in these complaints ; do by their greasy viscid quality, foul the coats of the stomach, greatly injure digestion, and very frequently increase the symptoms they were meant to remove.

CHAPTER X.

WHEN there is a fixed pain in the breast or sides, increased by coughing ; that does not yield readily to bleeding, and the antiphlogistic medicines usually given ; I have seen good effects from small blisters, applied to the part, and repeated as soon as the skin is healed. This method answers better than using the blistering ointment, which always occasions great pain and soreness, and seldom produces a copious discharge.

If there is any suspicion of matter being collected in the cavity of the thorax ; and the symptoms are either not so clear and determined, as to warrant the operation for the empyema ; or if they are, the patient's fears will not allow it to be performed ; I recommend

recommend a seton, made as near as possible to the part affected, which frequently produces considerable relief.

Not only in phthisis, but in many other chronic complaints; issues, caustics, setons, and perpetual blisters have been very generally used. It has been supposed, that the matter discharged by these means, was the diseased particles of the blood; and that in time it would work itself pure, and health be restored. That an idea of this kind, should strike people of common understanding, unacquainted with the principles of the animal œconomy, is very natural; but we are surprised to see men of learning and experience, entertain such a notion. “ Further, while blisters evacuate chiefly the serous humours, issues and setons generally discharge true purulent matter, and on this account may be of greatest service in internal ulcers *.” Notwithstanding the wonderful power of that principle called nature, in the human body; I doubt much whether it is capable of expelling the diseased parts of the blood, by these artificial openings, and retaining the sound.

The fact is, that wherever there is a wound with loss of substance; or what is precisely the same thing, where a wound is prevented healing by the intervention of an extraneous body; there will be a discharge of matter from the mouths of the divided vessels; and the quantity and quality will depend upon the degree of tone in the muscular fibre, and in some measure upon the situation of the wound. For I believe it will be granted without bringing evidence in proof; that an issue in a sound healthy person, will discharge as much, and as purulent

* Whytt, Remarkable Effects of Blisters, p. 720. 4to ed.

rulent matter, allowing for the difference in the muscular fibre, as in a person that is diseased.

An author upon this subject, has recommended drains, which he emphatically says “*may be felt* *.” Issues made in the back with caustic, three inches diameter; that when the eschar is digested off, are capable of containing *fifty peas*. As the greatest number of consumptive patients are generally of the weak and timid sex; I fear such a remedy, would be thought more formidable than the disease; even were we sure of its producing good effects.

As far as my experience has gone in this matter, I have observed; that in proportion to the quantity of discharge, they have tended to reduce the strength of the patient; and were always sore, painful, and disagreeable. I have never seen any of the magnitude mentioned above; but I should apprehend the pain occasioned, in a delicate, irritable, diseased habit, by an ulcer of nine inches circumference, full of hard peas, would of itself, produce a very considerable degree of fever. On the whole therefore, as a general remedy; I do not think myself warranted in recommending them in Phthisis Pulmonalis.

As from the earliest ages, to the present time, it has been so generally taught by authors and professors, that the seat of disease was in the circulating blood; it might reasonably have been imagined, an easy matter to determine, when, and in what manner, that fluid was acted upon, and became acrid, putrid, or mixed with various humours. But as they are silent upon this important part of the subject; and instead of proving a position, so essential in the practice of medicine, are always supposing the affirmative taken for granted: I fear in this, as

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* Mudge, on the Catarrh.

in many other instances, they have founded their theory upon the sandy basis, of general and undefined terms.

That the circulating blood is susceptible of various changes ; we are fully convinced, by examining its parts, when out of the body.

From inanition, consumptions, and other lingering diseases, in which the body has not been sufficiently nourished, we find it thinner, and the red particles in a less proportion, than when in a healthy state. From intemperance, ease, and luxury, it probably acquires a different property.

During inflammatory disorders, when the circulation is greatly quickened, and the animal heat considerably increased ; we find it thinned ; but the relative proportion of crassamentum is not diminished ; the coaguable lymph, not retaining the red particles, they precipitate to the bottom of the vessel ; thereby forming what is termed the buff or size.

Since the publication of the microscopical observations made by Leeuwenhoeck ; the red particles of the blood have been universally believed to be globular ; that form being supposed better adapted for circulating in vessels of various diameters. But from the ingenious experiments of a late eminent anatomist, we are induced to believe, that they are perfectly flat vesicles, containing a fixed central point ; that they circulate in this form through the vessels ; that they do not become globular, but in consequence of putrefaction out of the body ; and that this form is essential to life, he presumes, from having observed it take place throughout the animal kingdom *.

The

* Hewson, on the red Particles of the blood.

The motion of the blood being accelerated, probably depends more upon the action of various stimuli, applied in different degrees, to the coats of the vessels in which it circulates, by means of the nervous system; than upon any quality possessed by the particles of the fluid,

In many diseases, where the crafis of the blood was supposed to be broken down, and become putrid; as in the plague, and scurvy; on examination, no such appearance has been discovered; on the contrary, the crassamentum was found as firm as in the highest degree of inflammation *.

From the opinion being adopted, that the blood underwent certain changes in its constituent parts, producing disease, the application of medicine has been directed to that source. Hence we have seen formed, the long catalogue of antiputrescents, antiscorbutics, antihectics, sweeteners, alteratives, &c. But experiments have evinced, that the greater part of medicines given to answer such intentions, do not enter into the circulating fluids.

On examining the blood of a person, who had taken steel for some time, with a tincture of galls, it gave no sign of that metal being present. But upon mixing with it, a quantity of Sal Martis, the serum became immediately black on adding a few drops of the tincture †. Cathartics and emetics act only upon the stomach and bowels. Mercury has always been supposed, to pervade every part of the body; and even to lodge in the cells of the bones. Yet from some experiments I have made, and others that

* Lind, on the Scurvy. Millman, on Putrid Diseases.

† Philosoph. Transact. Vol. 50. Pt. 2. page 595.

that have been lately published * ; I am inclined to believe, its action is principally confined to the lymphatic system ; and that it seems to me very doubtful, if ever fluid mercury circulates with the blood.

Notwithstanding the many discoveries which have lately been made in this part of physiology ; we are far from being perfectly acquainted with the properties and parts of this vital fluid. And as it is generally

* The many experiments that have been made, by an ingenious and accurate anatomist, upon the blood in various states, on the saliva, and upon the urine of persons under the influence of mercury ; in order to discover whether it was present in these fluids ; seem to determine it in the negative. He observes, " that the changes it (corrosive sublimate) afterwards undergoes in the body, *in becoming quicksilver*, is most probably produced in the *blood-vessels.*" p. 144. He afterwards says, " I am inclined however, upon the whole, rather to think with *Mr. Hunter*, that the mercury is in the *human fluids* in the form of a new salt ; since gold, &c. were not amalgamated by these fluids, obtained in such a state as made them be presumed to be fully saturated (if one might say so) with mercury." p. 219.—At last he concludes, " In whatever state mercury exists in the blood, I am convinced that it always exhales from the body, after its action is over, in the form of running mercury ; and that it may not only be decomposed, but somehow acquire phlogiston in the *human fluids.*" p. 223. If I understand the learned author right, the mercury when introduced to the habit in the form of a salt, is reduced to fluid quicksilver in the *blood-vessels* ; that in order to produce its effects on disease, it is again changed into a new salt ; and last of all, in order to make its escape, after producing such effects, is changed a second time to *running mercury*. I must confess such repeated changes and alterations do not seem to be consistent with the usual simplicity of nature's operations ; and that it is probable the mercury acts solely upon the lymphatic system without entering the *blood-vessels* ; where, had it been in a fluid form, the above experiments would have discovered it.

See Cruikshank's Letter on Absorption.

rally presumed to be much, much seldomer in fault * than we have been taught to believe; it surely becomes a duty to direct our attention particularly to the stomach and viscera; where probably, enquiries will be attended with more success, and remedies applied with greater effect.

In the early period of Phthisis, when the fever and heat are considerable, small doses of nitre, or the common saline mixture in larger quantities than is commonly given, cools the habit, and has a tendency to keep the body open; which should be carefully attended to. One motion at least should be procured every day; for which purpose, a proper dose of Sal: Polychrest and Rhubarb may be taken at bed-time, or in the evening. I have found this composition a useful medicine in these cases, though in no ways deserving the encomiums that have been lavishly bestowed upon it. If this powder should disagree with the stomach, which sometimes it is apt to do, a morsel of lenitive electuary will answer the purpose equally well.

When by these means the fever and heat are considerably abated, and before purulent matter appears in the spitting, I have sometimes used the Hydrargyros in small doses with singular advantage: but the cases having been few, and it requiring great precaution, the judicious physician must determine, from the symptoms and other circumstances, the quantity and mode of giving it. For I should be very cautious in recommending any medicine here, that I was not warranted to do from the fullest conviction

* " The more we are acquainted with the animal economy, the more reason we find to believe, that the seat of diseases is not in the blood; with the sensible qualities of which, it seems to have very little relation."

viotion of its propriety ; and that conviction can only arise from long experience.

In the advanced period of the disease, when the hectic is confirmed, and the morning sweats profuse; I find a draught with the Elix: Vitr: acid: given at bed-time, cools the patient, and checks the colligative discharge by the skin ; it may be joined with an opiate, when that is indicated. The Spiritus Vitrioli dulcis, in the quantity of two or three drams to a pint of water, with some red syrup, makes an elegant and grateful julep ; a glassful of which may be taken frequently ; it attemperates the heat, relieves the sinking spirits, and acts as a gentle bracer.

CHAPTER XI.

THE regular remissions in the pulmonary hectic, and its general similiarity to intermitents, when joined to the belief of its arising from the absorption of putrid matter, very naturally suggested the practice of giving the Cortex Peruvianus. But though this medicine has been exhibited in every stage of the disease, in every form and quantity, there never was an instance of a consumption of the lungs being cured with it *. On the

* The reader may peruse a paper on this subject, by the late Dr. Fothergill, Med. Obs. and Inq. Vol. 5.

the contrary, I believe experience will justify me in asserting, that in every case where it has been given, the symptoms have been aggravated, and the patient precipitated into the last stage of the disorder.

Hectic is a term so undefined, and applied to so many fevers, arising from causes totally different; that it is not to be wondered, if the bark has cured some of them. As for instance; in large discharges from ulcers, or from a long continuance of the fluor albus, the flesh and strength melts away, the pulse becomes quick, and a slow continued fever is the consequence; in such cases, under proper restrictions, the bark is a proper and effectual remedy. But as I mean to confine myself to the genuine Phthisis Pulmonalis, I shall not take up the reader's time with common-place observations on other subjects.

I have entered so fully into the nature and cause of this fever in former chapters, that I flatter myself, I have convinced the reader how perfectly free and distinct it is from every symptom of putrefaction; and my opinion upon this subject will receive additional strength, by considering the effects of the same medicines in each of the fevers.

In the putrid fever the remedies found most effectual are, bark, snake-root, camphor, volatiles, cordials, and others of the antisепtic class, together with a plentiful use of wine. Let any of these medicines be given in the pulmonary hectic, and what will be the consequence? The fever and thirst will be increased, with pain, tightness on the breast, and difficult breathing; the fever will become continued, attended with slight delirium; perhaps nature may make an effort to relieve the constitution by the bowels; the diarrhoea will come on before its usual period, and the patient be hurried to his grave.

grave. This picture is not drawn from any fancy; I have seen repeated instances of it in practice. And therefore earnestly enter my protest against the whole tribe of cordials and antiseptics; excepting only a very small portion of vitriolic acid.

When the patient has arrived at the second or suppurative period of the disease; when he spits up much matter or pus with the mucus; when the cough is frequent and violent, particularly in a recumbent posture; when the hectic is completely formed, with regular remissions and colliquative morning sweats; the intention of cure is, to evacuate the pus in the speediest and most easy manner; to allay the distressing cough, and to give ease and rest to the inflamed and tender lungs.

If the purulent matter can be evacuated from the vomicæ as often as it is collected; not only absorption (if ever it takes place) will be obviated, but the pus not being deposited in the air vesicles and ramifications of the asperia-arteria, in such quantities, much laborious coughing will be prevented; and the tender inflamed lungs acquire rest, the great desideratum in this disease. For the cough not only fatigues and weakens the patient; but by the reiterated concussions of the lungs, the tubercles that are recently formed are, by increasing the inflammation, brought forward to suppuration much sooner than they otherwise would be.

These desirable purposes can only be answered by exciting to vomit frequently. Such a quantity of Pulv: Ipecac: is to be given in the morning fasting, and in the evening, if necessary, as will make the patient vomit once or twice; and this must be repeated every day, as I have before directed; should there be no particular reason to the contrary. It is wonderful to see the effect of this simple reme-

remedy * ; the patients themselves are often astonished at the relief they feel, and confess it in the strongest terms. As by vomiting, a quantity of matter is discharged from the lungs, they are sensible of immediate ease ; they breathe with less difficulty, and remain many hours almost free from coughing ; their spirits get up ; and, as they sometimes exclaim, they feel themselves in another world. Although in some cases it is difficult to persuade them to begin such a course ; confirmed custom not being easily overcome, and long prejudices having great weight even with those in health ; beside, such is the extensive influence of knowledge ; that in chronic complaints, particularly consumptions of the lungs, not only the patient, but every one they are connected with, become physicians ; and reason and dispute every inch of ground : but when the remedy has been used a few mornings, the sensible relief they experience removes every doubt, and induces them to persevere with great punctuality.

In this period I continue the use of Elix: Vit: acid: and the julep, with Sp: Vit: dulc: with the opiate at bed-time, if the cough disturbs the rest ; considering it essential not only to procure sleep, but to keep the lungs quiet ; which, happily for the distressed patient, is always in our power by the means of opium.

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* Egregium verò vii medicaminum emeticorum sæpius in eo expertus sum, quotiès scil. in maximo discriminè versari videtur, à gradu asthmatis aucto, et ab inappetentiâ, et maximo languore indè consequenti.

Morton, Phthis. p. 241.

A vomitorio levamen universim sensit, id que non tantum à symptomatis Phthisicis, verum etiam Rheumaticis.

Morton, Phthis. p. 317.

In common cases, I order no other medicine, but what may be necessary to keep the body open. Many circumstances will perpetually arise, where the physician must be guided by his own judgment; here the subject can only be treated in general terms; to descend to particulars would serve no other purpose, but to swell the work, and embarrass the young practitioner.

As the major part of those affected with Phthisis are females; they are greatly alarmed at the cessation of their monthly evacuations, which usually takes place when the disease is confirmed, and are very solicitous for their return; but as I consider this circumstance as merely the effect of the increased discharge by the lungs and pores, and general weakness of the habit; I never order any thing with an intention to its removal, well knowing, that will take place, when the strength of the muscular fibre is restored.

If the plan which has been laid down, is adopted before great ravages are made in the constitution; before the body is greatly wasted, and the strength reduced; I am hopeful the third or last period of the disease will seldom occur. But if from lateness of seeking relief, or from any other cause, the diarrœha has made its appearance; I persist in recommending the use of the Pulv: Ipecac: as the strength of the patient will permit. If astringents are of any use (and in desperate cases we must attempt relief by every means) they should be of the mildest kind; small doses of torrefied rhubarb; Decoct: Lig: Campech: and, as acidity is frequently present in the first passages, the Decoct: Alb: makes a very proper drink for common use.

Did our power over the operations of the body extend so far, as to regulate the discharge by the pores

pores and intestines in such a manner, as only to evacuate the offending matter ; they would not be attended with any ill consequence. But the effort raised in the constitution, in order to discharge that offending matter ; seems to give so strong a tendency to the humours, and occasions such an irritation or disposition in the excreting organs ; whether the pores, intestines, stomach, or kidneys ; that the discharge continues longer than is necessary to relieve the habit ; by which means the bodily strength is greatly reduced.

When a medicince is taken to excite vomiting, the coats of the stomach become so irritable, that very often the operation may be continued to any extent, by only drinking warm water. Sweating and purging sometimes continue long after the cause ceases to act. A ptyalism, raised by a scruple of *Æthiops* mineral, has been known to continue, notwithstanding every means used to stop it, for several weeks. Custom and habit have a wonderful effect upon the bodily organs, as well as upon the mind ; and an evacuation that has frequently taken place, will be more easily occasioned, than if the body had not been accustomed to it.

In this manner, I apprehend, the profuse morning sweats are continued much longer than is necessary to relieve the constitution from the accumulated fluid ; and therefore checking them will prevent that reduction of vital strength which always succeeds. But this must be done with caution and moderation ; for whenever they have been entirely prevented, the fever has become continual, more violent, and every symptom exasperated. Upon this principle I have recommended the few mild astringents before mentioned. Their quantity and use must depend upon their effects ; for in this, as in many other diseases, it is not easy to determine

à priori

à priori what will be a sufficient dose; for which reason I have avoided giving any formula of the medicines recommended.

When the patient is recovering, and has lost the cough and hectic fever; a languor and weakness frequently remain. In this case, bitters, and the chalybeate waters of Islington or Tunbridge, will have a good effect, in restoring the tone of the first passages, and strengthening the digestive faculties. But as all tonicks, in their action on the human body, quicken the circulation, and augment the heat, we must be exceedingly cautious in giving them whilst any fever remains.

In a disease attended with so many alarming symptoms, and so frequently terminating fatally; in which authors of the first reputation have recommended such a quantity and variety of medicines; it may appear, that the remedies I have proposed are simple and few in number. They are what I have experienced to be efficacious; and I seldom find it necessary to prescribe to the fears or fancies of the patient. For in this, as in many other complaints, I am disposed to believe; the more we simplify our practice, the better we shall ascertain the effects of the remedy, and the greater will be our success.

CHAPTER XII.

FREE country air is peculiarly necessary, and it should, if possible, be procured early in the disorder. But this, like many other means of relief, is too often deferred till it cannot be of any real use. How often do we see an unfortunate patient, worn down to the last dregs of life, hurried out of town to Bristol, or some other place at a distance from the capital, expire upon the road; before he reaches half-way to his destination? I cannot too often inculcate the necessity of keeping the inflamed lungs, as much as may be, at rest; and nothing contributes so much to that end, as breathing a pure, dry, elastic air *. There are many places near town well adapted to consumptive patients in every season of the year; where the keen north-east winds of the spring, and the sultry heats of the summer, may be avoided. This subject has been so accurately treated by a late eminent physician †; the situations and changes pointed out with so much medical skill and precision, as renders it unnecessary for me to enlarge upon it here.

Consumptive

* If the method recommended by Dr. A. Fothergill, in his ingenious Hints on Animation, of giving dephlogisticated air, should become practicable; I think it is probable to prove a valuable medicine in diseases of the lungs.

† Dr. Fothergill, Med. Obs. and Enq. Vol. 5.

Consumptive patients are very generally ordered to Bristol, to drink the waters at that place. If this journey is undertaken early in the disease, before the patient's strength is exhausted; the exercise of travelling will probably be of use; and drinking pure light water in a clear air, highly conducive to the cure. But I am inclined to think, there is no restorative quality in this water, superior to any other of equal purity and specific gravity.

Of all the means that have been attempted to stop the progress of this ravaging distemper; none have been so often recommended, or so highly celebrated, as riding on horseback. The learned Sydenham, who deservedly lies upon the same shelf with the father of physic, had so high an opinion of this exercise, that he afferts, neither mercury in the lues venerea, nor the cortex peruvianus in intermit-tent fevers, are more certain remedies, than riding on horseback is in the Phthisis Pulmonalis; provided the journeys are sufficiently long, and the tra-veller takes care to have his sheets well aired *.

When

* " Neque magis Hypochondriacis prodest hoc exercitii genus, quam Tabidis Phthisicisque, quorum nonnulli mihi sa-
" guine juncti multum terrarum equo vectore peragrantes, ex-
" meo consilio, sanitati sunt restituti; cum certò sciam me vel
" medicamentis quantivis pretii, aut alia methodo, quæcumque
" demum ea fuerit, nihil magis iisdem proficere potuisse, quam
" si multis verbis hortatus fueram ut rectè valerent. Neque
" in levioribus tantum malis, crebrâ tussi et macie stepatis, id
" remedium obtinuit, sed et in Tabe tantum non deploratâ,
" ubi nocturnis sudoribus jam etiam accesserat Diarrhœa ista
" superiùs dicta, quæ Phthisi confessis mortis prænuntia solet
" esse, atque adeò ut plurimum ultima rerum linea. Verbo
" dicam. Quantumcunque exitialis Phthisis et sit et audiat,
" utpote quâ intereunt duo ferè trientes eorum quos morbi
" Chronicj jugulant, hoc tamen sanctè affero, quòd neque
" Mercurius in Lue Veneriâ, neque Cortex Peruvianus in In-
" termittentibus

When an author of such extensive practice, learning, and candour, makes an unqualified assertion, which unfortunately is universally acknowledged to be void of foundation ; it surely ought to humble every writer in his own eyes, and teach him to speak with diffidence and modesty of the remedies he recommends.

It is well known to every practitioner, who has been conversant in diseases of this kind ; that the exercise of riding on horseback, unassisted with other remedies, never cured the Phthisis Pulmonalis ; on the contrary, the indiscriminate use of it has, I have no doubt, very frequently been the means of aggravating the disease *.

In coughs without inflammation, before tubercles are formed, or at least not increased to any degree, it certainly will be of use ; as no exercise so effectually strengthens the solids, and removes obstructions in the hypochondriac viscera. But where the tubercles are advanced, or vomicæ formed ; where the parenchymatous substance of the lungs is much inflamed ; where rest and quiet are so essentially necessary ; agitation on horseback must be extremely distressing

“ terminentibus efficaciores extent, quām in Phthisi curandā
 “ Exercitium jam laudatum; modò æger curet, ut linteamina
 “ lecti probè fuerint arefacta, atque etiam ut satis longa itine-
 “ ra emetiatur. Attamen hoc notandum, quod vitæ ἀξὺν præ-
 “ tergressis multo diutiū in hoc exercitio persistendum, quām
 “ infra istam ætatem positis. Atque hoc multiplici experi-
 “ entiā, quæ vix me fessellit unquam, dedici: Et licet equo
 “ vehi Phthisicis præcipue conferat, tamen et itinera curru-
 “ facta mirandos sanè effectus quandoque ediderunt.”

Sydenham, Epist. ad Dr. Cole.

* “ Hic vero Phthisicus alter est de duobus, quibus laudata
 “ adeo ab Sydenhamio equitatio mortem acceleravit.”

Morgagni de Sedibus & Causis Morborum,
 Lib. 2. Ep. 22. art. 13.

distressing to the patient, and greatly increase the inflammation *. Add to these considerations, that the exercise is usually taken at the most improper season ; in the middle of the day or afternoon ; when the hectic fever has come on, and consequently the tender lungs are more unfit for motion. Whereas, when the exercise is adviseable, it should be taken in the morning, when the fever is off ; and, provided the weather is good, the earlier the better ; for riding in the heat of the sun fatigues the patient, and aggravates every symptom.

Were riding on horseback and country air productive of the good effects we have been taught to believe ; the disease would hardly ever prove mortal, but in great cities ; where these remedies are not to be procured. But it is frequent and fatal in every county in England ; where the patients constantly enjoy the one, and generally the other, in some degree. Allowing riding on horseback and long journeys to be as effectual as Sydenham has asserted ; there are but few consumptive patients whose circumstances will permit them to make the experiment ; the greater number being among the lower, and middling class of the people, who cannot even afford the expence of breathing country air, so essential in every period of the disease.

In the convalescent state, when the patient is recovering, when the fever abates, and the cough and spitting less frequent ; easy motion on horseback, in the morning and forenoon, as it agitates the whole frame, will greatly assist in recovering perfect

* Errant sœpè medici, dum exercitationes ægris et valetudinariis imponant, præsertim Phthisicis, quibus equitatio indiscriminatim imperatur.

C. Wintringham, de Morb. Quibusd.
Comment. § 73.

fect health; but they should be exceeding cautious of riding in the evening, if there is the least increase of fever. Before this period, if their circumstances will permit, they should go out in a carriage in the morning and forenoon; but even that should be avoided in the evening, if there is an exacerbation of fever in the afternoon. It may be continued as long as their strength will admit of, without fatigue. If this cannot be procured, let them move about a garden, or the fields, when the weather is fair; or wherever there is vegetation and shelter from the sun. Their motion should be gentle, even, and slow; avoiding every thing that increases their quickness of breathing, particularly going fast up stairs, or any acclivity.

Consumptive people should go to bed early, lie upon a hair matras, and get up soon in the morning; even if they are obliged to lie down upon the bed or a couch in the course of the day. For nothing weakens and relaxes the body so much, even in health, as lying several hours in the morning, dosing between sleeping and waking; its effects being similar to a hot bath, and nearly as enervating. But in the disease under our consideration, it is peculiarly prejudicial; as it promotes and prolongs the melting sweats, which by early rising are checked, and the subsequent languor in some measure prevented. Independent of these considerations, the heat of the bed has been, in the opinion of men eminent in the profession *, thought to increase pleurisies and inflammations of the breast: how improper must it then be, where a continual inflammation subsists? This is an additional reason for rising early, and which I cannot too strongly recommend.

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* Sydenham. Musgrave, Gulst. Left.

We are frequently surprized to find the minds of consumptive people wonderfully supported by hope, through every stage of the disease, even to the last moment of their lives. Firmly persuaded they shall recover their health, and live to execute the numerous plans they are ingenious and industrious in forming. This happy disposition should be encouraged ; and every thing that is likely to disturb the quiet of their minds, assiduously guarded against. Such amusements as their situation permits them to share in, and to which their inclinations lead them ; will not only alleviate their sufferings, but, from the sympathy subsisting between the mind and body, contribute, not a little, to removing the complaint. Above all, music produces this effect in an eminent degree ; it gently sooths the imagination, harmonizes the passions, and attunes every jarring element in our frame to quiet and rest. This was the opinion of the respectable author of that elegant poem, *The Art of preserving Health* * ; where we are at a loss which to admire most, the justness of the medical precepts, or the beauty of the numbers they are delivered in.

* There is a charm, a power, that sways the breast ;
Bids every passion revel or be still ;

Inspires with rage, or all our cares dissolves ;
Can soothe distraction, and almost despair.

That power is *M u s i c* : —

Music exalts each joy, allays each grief,
Expels diseases, softens every pain,

Subdues the rage of poison, and the plague ;
And hence the wife of ancient days adored

One power of med'cine, melody, and song.

Amstrong, *Art of preserving Health*.

CHAPTER XIII.

THE great efficacy of sea-voyages in curing diseases has been evinced by authors, both ancient and modern. In Phthisis Pulmonalis, among the former, it is recommended by Celsus * and Pliny †. Among the moderns, by Boerhaave ‡, Mead §, Cullen ¶, Whytt §, and Gilchrist, who has

* " Quod si vero Phthisis est, opus est, si vires patiuntur longa navigatione. Si id imbecillitas non sinit mare tamen, sed non longe, vectari commodissimum et."

Celsus, Lib. 3. Cap. 22.

" Utilis etiam in omni tussi est peregrinatio, navigatio longa, loca maritima."

Celsus, Lib. 4. Cap. 4. Sect. 4.

" Si vero pituita Stomachus impletur ultis navigatio."

Celsus, Lib. 4. Cap. 5.

† " Quin et vomitiones ipsæ, in stabili volutatione commotæ, pluriinis morbis capitis, pectoris, oculorum, medenter, omnibusque propter quos elleborum bibitur."

Plin. Hist. Lib. 31 Cap. 6.

‡ Aphor. Sect 857, 858.

§ Monita et Præcepta Medica, Cap. 4. De Febris Lentis.

¶ Cullen, First Lines of the Practice of Physic.

§ " A young gentleman lately my patient, who had a very delicate nervous system, and whose stomach and intestines were so uncommonly sensible, that a single stool, procured even

has written expressly upon the subject ; and relates many cases apparently authentic, where it performed a perfect cure.

Of late years it has been the custom to send consumptive persons to Lisbon, and other parts abroad ; but this, like every attempt to cure, being generally used when in the last period, we are not to wonder that it seldom succeeds.

In the cases where change of climate has proved successful, I am disposed to attribute the benefit received, to the effect of the sea-voyage, rather than to the air of the place where they resided. I have myself known some cures performed by this means ; and have no doubt, that if it was used in proper time, before the strength of the patient is destroyed, and the digestive powers weakened, the instances would be more numerous.

Some authors who have written upon this subject, have supposed the good effects of sea-voyages are produced by the patients constantly inhaling balsamic and resinous particles with which the air is impregnated from the ship and her equipage ; and to the exercise by the ship's motion. All this is merely imaginary. Whoever has been at sea must know,

“ even by Elixir Sacrum, made him faintish ; and vomiting
“ or purging was almost sure to bring on fainting fits, with
“ slight convulsions. This person, I say, had his constituti-
“ on so changed-while he was at sea, that although, during a
“ voyage of 4 or 5 weeks, *he vomited much every day*, and
“ purged frequently ; yet he had neither any faintings nor was
“ sensible of any particular weakness in his stomach or bowels.
“ After this voyage he had no return of those fits to which
“ for some time before he had been liable, till at the distance
“ of eight months, when he applied a blister to the under
“ part of his breast ; the pain of which, when taken off, oc-
“ casioned fainting, with slight convulsions.”

Whytt, on Nervous Disorders, p. 643.

know, that there is not near so much exercise as in a carriage: and if we consider the free circulation of air; the wind perpetually blowing whatever smells may arise, away from the vessel; and the largenes, and cleanness of the apartments; whatever balsamic or resinous particles may fly off from the ship or her rigging; must be so thinly dispersed, that no possible effects can arise from their application to the lungs.

In consequence of this mode of reasoning, patients have been placed in small rooms, in which gums and resins were burnt on hot iron. The air being loaded with smoke and vapor, they breathed in it for a certain time every day, and it is said with good effect *. Various other steams from vegetable substances have been used upon the same principle; but as far as I can judge from experience; and I have seen them tried for a great length of time; I am disposed to think they produce no permanent relief; and very frequently I have seen the cough aggravated, by the heated air stimulating the inflamed tender lungs. One constant effect of all these applications, is quickening the breathing, which ought at all times to be carefully guarded against.

When people first go to sea, they are, with few exceptions, always sea-sick, which continues many days, in some the whole voyage; but, after a short time, only in the morning when they first stand erect; for during its utmost violence, they are rarely sick in an horizontal posture.

To the sickness, I attribute the success of sea-voyages in Phthisis. For though this is of all sicknesses the most distressing; straining violently, till pure bile is pumped into the stomach and discharged; thereby occasioning obstinate costiveness; yet their

* Mudge, on the Catarrh.

their appetite remains good, their spirits light and cheerful, they get flesh, and are evidently in perfect health. I have known several people, who were always sea-sick when it blew hard, even if the ship was at an anchor; and though they were subject to this for years, yet their health was not in the least impaired. This I consider as a positive proof, that vomiting may be repeated frequently, and persisted in to any length of time, without injury to the stomach or general health; for sea-sickness is more violent, than the operation of any emetic medicine that ever I saw given.

In the cases enumerated by Dr. Gilchrist, the patients were generally sea-sick, and vomited much bile; and in some, the good effects ceased, when they grew familiar to the ship's motion and were no longer sea-sick. He relates the case of a consumptive patient who went to sea three times; the distance ten leagues each time; he was each time sick, vomited bile, and was cured of his disease. The Dr. supposes the benefit his patients received, to arise from the exercise, and breathing a pure air, impregnated with saline, bituminous particles. But in the last case we have mentioned, where the patient was at sea only five or six hours at a time, the effects could not proceed from the air or exercise; but were evidently owing to the vomiting. The stomach was cleaned out, the bilious obstructions removed, and the digestive faculties restored; good chyle was produced, and the body recovered its former health; the cause of the disease being removed.

The instances in which sailing has been tried, having been in desperate cases, and consequently often failing, ought not to be brought as an objection to its use. I must own I see no difficulty in carrying such

such a practice into execution with as much ease, as going from London to Bristol.

A trial might be made in short trips on the western coast of England, or across the channel to France; or even to Holland, according to the season of the year. When a distant voyage is eligible, the southern climates should be chosen. Lisbon is near, and accessible by the packets going every month. Madeira is still better, being at a greater distance, more to the southward, and the air, from its insular situation, purer and infinitely more healthy. But the Mediterranean is what I would prefer to all other sea-voyages. The time at sea is sufficiently long; the patient would breathe the soft balmy atmosphere of Italy, and feed upon its delicious fruits. There, they might make excursions on shore, and agreeably amuse their minds, in viewing the remains of antiquity, to be met with almost in every part: but the ship should be their place of rest, to her they should return every night, as to their home. Italy is delightful for many things; but the accommodation for sleeping, especially to a stranger, is not among the number.

Whenever the patient has got the better of seasickness, or when they are not at first affected by the motion; I would recommend that they should vomit every morning, or every other morning, as the symptoms may indicate; and to guard against costiveness by any proper opening medicine: when the sea-water agrees, nothing can be more suitable. In a ship of any considerable size, they can be sufficiently supplied with proper food, and, excepting vegetables, equal to what they have on shore.

This remedy, like every other, to prove effectual, must be used early in the disease. When that is the case, and when it can be undertaken without disturbing the mind, in a proper season of the year;

year; in a ship of such burthen as to afford every necessary convenience; and under the restrictions above-mentioned; it is my opinion, that art can furnish no method of cure more effectual in Phthisis Pulmonalis.

I must here solicit the attention of the reader, while I observe; that the great cause of the inefficacy of remedies that have been used in this disease, proceeds from the lateness of their application. The patient is usually far advanced before the physician is consulted. They have loitered away their time in using family nostrums, and oily greasy emulsions, till it is beyond the power of art to save them from the grave.

There is no disease more replete with danger than the pulmonary consumption, and that danger is augmented by becoming familiar from its frequency. It steals upon the patient under the insidious guise of coughs, colds, and rheums, of which this uncertain climate of ours is so productive: and when they, and their friends, so far from suspecting danger, imagine they are getting better; hear with astonishment that they are past recovery. This is a matter of such importance, that if I could only put people upon their guard, and quicken their apprehension of danger; I should hope my time had not been uselessly employed upon this subject.

From whatever method the symptoms of the disease begin to abate, it is essentially necessary to persevere with unwearied diligence; for a small relaxation may reduce the patient to his former point of danger. Even when the cure is perfected, and every symptom of disease has disappeared; it will be necessary to continue in his plan of diet for some time, and to return with cautious steps to his former mode of living. This in some constitutions

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can never be done with safety ; the disorder, in a peculiar manner, leaving a tenderness, and a disposition to its former symptoms, in the habit ; which render them liable to get cold, and susceptible of every variation in the weather.

The most effectual means of restoring general health, and strengthening the constitution, after they have been injured and reduced by this or any other chronic disease ; is by living upon a nourishing, simple, spare diet, not exceeding in quantity or quality ; breathing a pure, dry, country air ; taking such exercise as the strength will bear without fatigue, particularly on horseback ; and using the cold or sea bath with proper precautions.

CHAPTER XIV.

IT has long been a characteristic of the inhabitants of this country, to indulge in gross animal food : and it is extremely difficult to persuade them that any good can arise from abstinence. Even when ill, they think nourishing and comforting, essential to their recovery : and this is observed, not only among the lower and middling class, but among those, whose education and rank in life might be supposed to teach them better. Strong broths, jellies, wine whey, &c. are as regularly found

in a sick chamber, as if they thought a cook more essential than medical advice.

When the body is disordered, nature wisely shews an aversion to food; what then can be so absurd as to force down aliment when there is no appetite? Nothing——except drinking when there is no thirst.

The principle in the human body termed Nature, has a wonderful power of restoring health, if left to itself, and no impeding cause introduced to the constitution. Many diseases might be cured by abstinence alone, persevered in to a sufficient length of time; but that abstinence must be something more than lowering the common diet, and avoiding high-seasoned food and spirituous liquors. What I mean by abstinence, is living upon as little food as will support life, and that of the plainest and simplest kind, composed of particles the least heating and irritating; drinking only water; lying upon a hard bed, and rising early in the morning. I could adduce many living instances in proof of the efficacy this plan has been attended with. Perhaps the case most publicly known, is Wood, the miller of Bellericay, in Essex; who, from a corpulent and generally diseased habit, at the age of forty; became thin and perfectly healthy, by abstinence and exercise alone. He lived upon pudding made of sea-biscuit and a little milk; drank only water; lay few hours in bed; and used as much exercise as his strength would admit of, without great fatigue.

As the fluids of our bodies are perpetually circulating and changing; new chyle being constantly poured into the subclavian vein, collected by the lacteals and lymphatics; and the finer parts continually excreted by sensible and insensible perspiration, the grosser by other emunctories; by drinking only water, and living on a vegetable diet, merely sufficient

sufficient to support the strength ; those fluids will in time be entirely altered, their quality and disposition changed. The parts of the body which had been injured by disease, or intemperance, will recover their natural state, and health be restored. I am of opinion, where a sufficient degree of vital strength remains, and the digestive faculties are not destroyed ; few chronic diseases would resist a plan of this kind, strictly pursued for a sufficient length of time. It is not to be expected, that when the limbs are rendered useless, the joints fixed, and the glands indurated ; a spare diet will work miracles, and restore those parts to their original state. But it will do more than any other method ; and, where a cure cannot be performed, the symptoms will be mitigated, and the disease rendered supportable ; which, in many deplorable cases, is all that can be expected from art.

Such a plan should be entered upon with great caution and circumspection ; all sudden changes being dangerous. For though there is a power in the human body, as in the mind, of accommodating itself to its situation ; the inhabitant of the north enjoying health under the verticle sun in Africa ; yet such transitions, if possible, should be made gradually. Regard must be had to the former manner of life ; and where they have indulged freely in the pernicious luxury of the table, let them retrench by degrees, till they come to that point it is proper to remain at.

The changes in the constitution being produced by slow and imperceptible degrees ; patience and perseverance are therefore indispensably requisite.

Much depends upon the regulation of diet in every disease ; but in none more, than where the lungs are affected. In such cases, the usual practice has been, to abstain entirely from animal food ; and in general,

general, it is judicious and proper. In the inflammatory period of the disease, when the fever is continued, and before pus is formed in the lungs; I would recommend a vegetable diet, with milk, in any form it will agree with the stomach. Sago, barley, millet, and rice, make a pleasant variety; and ripe fruit may be indulged in at pleasure. Thames flounders, and small whittings, may be taken occasionally without prejudice.

In the advanced stage of the disease, when purulent matter is spit up, and the hectic fever with remissions and morning sweats compleatly formed; I think a small portion of animal food, taken for an early dinner, of use in supporting the strength. It should consist of chicken, or weak broth, from lamb or veal, in preference to beef or mutton; made by boiling the meat a short time.

Jellies of calves feet, harts-horn shavings, and isinglass, are universally recommended to the weak and infirm. They are made from the most viscid parts of animals; and by long boiling, their lighter and more volatile parts being dissipated, they are not only liable to the same objections as animal food in general, but I much doubt of their possessing any nourishing property. There is always a certain quantity of wine added to them, and that commonly considerable; they are therefore unfit diet for the consumptive; where it is necessary to be particularly guarded against cordial and nourishing messes.

Milk is a mild soft fluid, that requires little force to be assimilated into nourishment; it may be taken in any manner that is agreeable. Sometimes cows milk forms a curd too dense to be easily digested; in such cases, runnet-whey may be substituted, or asses milk, which is lighter; but it should be drank to the quantity of one or two pints a-day. The lightest

lightest and best of this class is women's milk, and when it can be taken, is to be preferred to every other. There are instances related of its curing, without the assistance of medicine, even in the last stage of the disease *.

The vulgar practice of mixing rum or spirits in the milk cannot be too strictly guarded against. Butter-milk, from its acescent quality, is cooling, nourishing, and refreshing; it may be drank at pleasure.

Ice-cream is extremely grateful, and not a contemptible medicine, especially when there is a disposition to hæmoptoe,

Oysters, muscles, craw-fish, and other testacea, are usually admitted into the diet of the consumptive. Their qualities are nearly equal, and are among the tenderest of animal foods; but from their viscosity, are not easily expelled. They may be taken occasionally as a variety.

It is to be carefully observed, that the quantity of food should be the least the patient can subsist upon; and of parts the softest and most easily dissolved. A small portion should be taken at a time, and repeated the oftner.

The drink, in every period of the disease, should consist of water, the lightest and softest that can be procured, with toasted bread infused in it; or, what is better, boiling water poured upon toasted bread, and let stand till it is cold, by which the animal and vegetative matter will be precipitated †. Milk and water, runnet-whey, and lemonade, may be taken as a change. In summer, when there are ripe

* Robinson, p. 2. p. 148.

† Distilled water is lighter than any other, and when it can be procured, is greatly to be preferred, not only as a soft pleasant drink; but its medicinal quality I consider of great importance, in the cure of chronic diseases.

ripe fruits, their juices mixed with water makes an agreeable and elegant beverage. But when the patient is indulging with ripe fruit, attention must be paid to the state of the bowels, and the first tendency to a diarrhoea guarded against.

Wine, spirits, and fermented liquors of all kinds, however diluted, and however anxiously longed for, must be rigidly forbidden. They raise the spirits, and relieve the languor and faintness always attending on morning sweats; but they infallibly increase the succeeding fever, and aggravate every symptom.

To those unacquainted with the chambers of the sick, such regulations may probably appear trifling and unnecessary; but they who see and know, how sick people are dieted; know that upon such trifles, the well-being of the patient depends. In vain the physician may prescribe the most powerful and efficacious medicines, if the nurse is allowed to pour in strong broths and high-seasoned hashes in his absence.

I cannot too strongly inculcate, the greatest attention to diet in every period of this disease. Diet alone, without the aid of medicine, will go great lengths in the cure; but there is no medicine, nor any other remedy, that has yet come to my knowledge, capable of producing any permanent relief, without a strict regulation of diet. And however severe such restrictions may appear to the patient or their friends; they may rest assured, and I say this with full confidence, that so far from being starved, as they so much apprehend; a short trial will convince them of its powerful good effects.

CHAPTER XV.

SOME authors have supposed pulmonary consumptions to be infectious *. Of this I can say little from my own experience. Perhaps in the last stage, when the remaining portion of the lungs is, as it were, deluged with purulent matter, particles of it may be exhaled by the breath ; and, if received into the lungs of a healthy person, the disease may possibly by that means be communicated. It is therefore necessary to guard against it, by preventing children and young people, being much about the sick ; particularly not to let them sleep in the same bed, or even in the same chamber, if it can be avoided.

I have now gone through the several heads proposed at the beginning of this work ; in the course of which, I have been less solicitous of writing well, than writing intelligibly. I have endeavoured to unite perspicuity with brevity, by avoiding common-place, trite observations, and useless digressions. Many errors and repetitions I am sensible will be perceived ; but, should the practice recommended be found useful, in a disease, hitherto, when confirmed,

* *Contagium etiam hunc morbum propagat. Hic enim affectus (uti frequenti experientia observavi) lecti socios miasmate quodam, sicuti febris maligna, inquinat.*

Morton, Phthisiologia, p. 70.

firmed, ranked among the incurables; I have no doubt but the reader will pass them over with liberality; regarding the design, rather than the execution.

A short recapitulation will put the reader in possession of my ideas upon this subject, at one view.

In the early inflammatory period, before matter is spit up, bleeding is to be repeated according to the urgency of the symptoms, and strength of the patient. Vomiting to be excited every morning. Cooling, lubricating, and anodyne medicines. The body to be kept open by gentle purgatives. Thin diluting drinks to be taken plentifully. The patient to keep warm, and promote perspiration. The bed to be avoided in the day-time. Diet; milk, seeds, and vegetables.

In the second period, when purulent matter is discharged in large quantities; the hectic fever, with remissions, and morning sweats, confirmed; and when the flesh is wasted, and the strength debilitated; the vomiting powder is to be repeated morning and evening; a draught with Elix. Vitr. at bed-time; and the julep, with Sp. Vit. d. through the day. If the cough prevents sleep, an anodyne to be given, and repeated occasionally. The body to be kept open by gentle aperient medicines. Diet to consist of seeds, milk, vegetables, ripe fruit, broth made of young animal substance, and the tenderest and smallest fish, oysters, muscles, &c. The drink, toast and water, or water with the juice of ripe fruit, and lemonade. Country air, gentle exercise, and sea-voyages, when they can be complied with.

In the third and last stage, when the diarrhoea makes its appearance, the same method of cure is to be continued; with the addition of mild astringents;

gents; varying the remedies according to the strength, and other circumstances, of the patient.

In every period of the disease, it is of the utmost importance to keep the mind calm, easy, and cheerful; for whenever anxious corroding care, vexation, or uneasiness, fits brooding on the imagination, medical assistance will be applied in vain.

To conclude. From considering this subject for many years, observing with careful attention such cases as have occurred in my own practice, and missing no opportunities of examining the bodies of those who have died of this disorder; I am of opinion, that a consumption of the lungs, if taken in time, before the strength is greatly debilitated, and the digestive faculties have lost the power of assimilating nourishment, is as curable, as any other disease of the internal viscera.

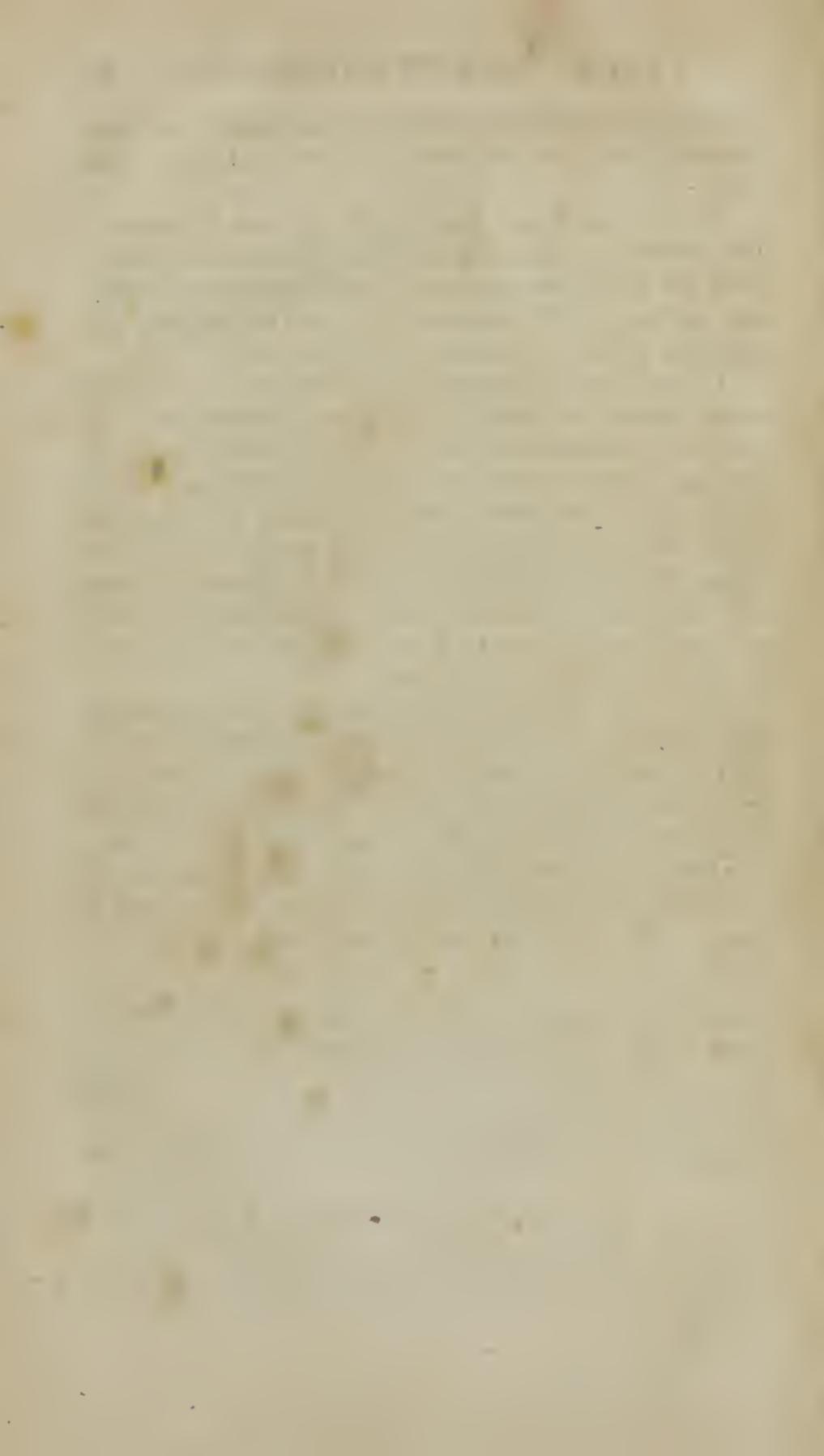
But if the patient, or their friends, will defer calling assistance; or, when called, neglect the advice, till the disease is far advanced; and spend that time in swallowing family nostrums, and useless nauseous medicines, which might be employed in following the best advice they are able to procure; are we to be surprized, that a disease, in itself always full of danger, should so frequently terminate fatally?

PRINCIPIIS OBSTA, SERO MEDECINA PARATUR,
CUM MALA PER LONGAS CONVALUERE MORAS.

OVID.

F. I. N. L. S.

O.



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